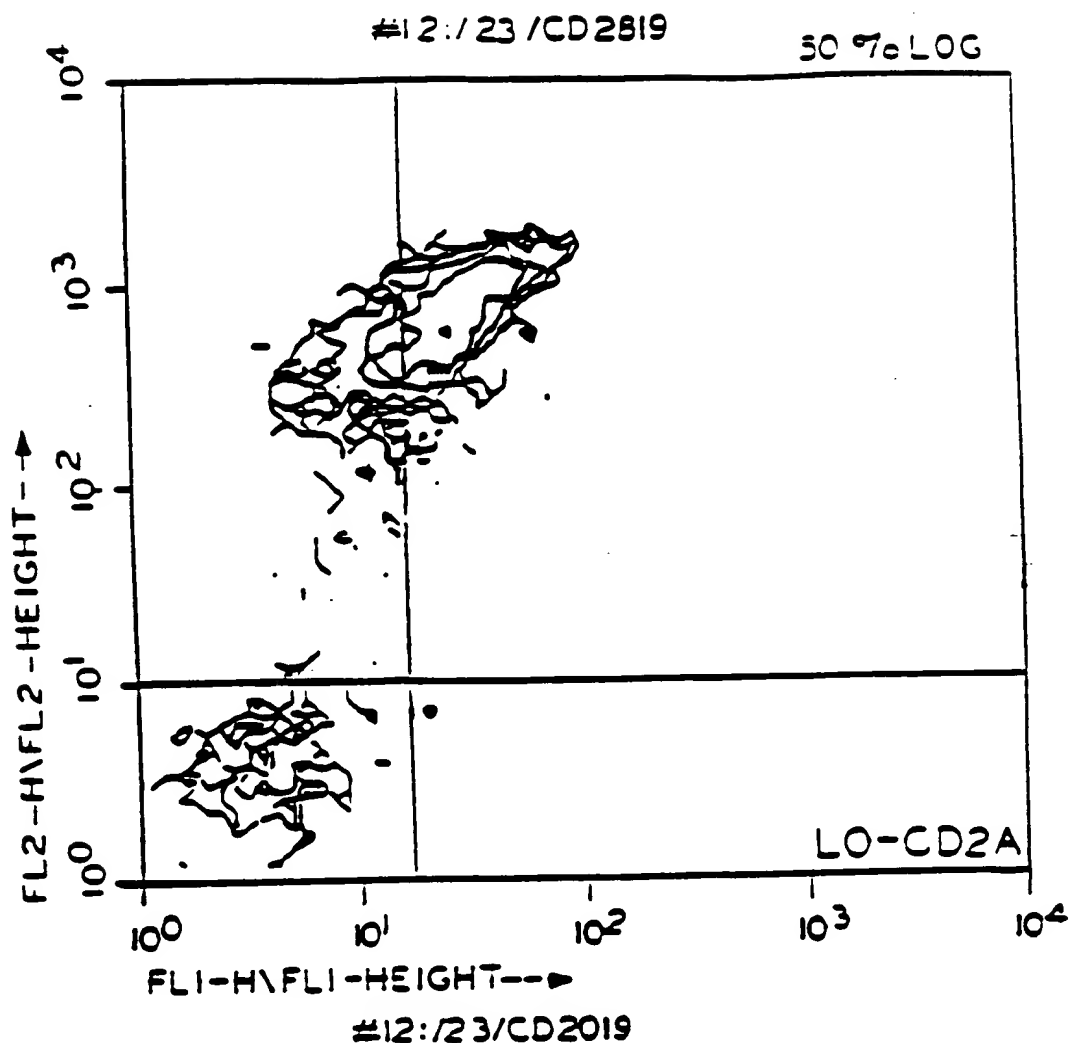


862040" 22095060

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FIG. 1



--- QUAD STATS ---

FILE: #12:/23/CD2019 SAMPLE: 059

DATE: 9/24/92 GATE G1-R1

PARMETER: FL1-H\ (LOG) FL2-H\ (LOG) QUAD LOCATION: 17.15.9

| TOTAL = QUAD | 5000 EVENTS | GATED = % GATED | 1290 % TOTAL | X MEAN | Y MEAN |
|-----------------|----------------|--------------------|-----------------|--------|--------|
| 1UL | 299 | 23.18 | 3.98 | 11.41 | 284.69 |
| 2UR | 831 | 65.97 | 17.02 | 32.70 | 630.65 |
| 3LL | 133 | 10.47 | 2.70 | 4.08 | 3.31 |
| 4LR | 5 | 0.39 | 0.10 | 25.11 | 6.54 |

ACQ CMD INST-CTRL GATES FORMAT PROTO SAVE

ACQUIRE

BEGIN

FINISH

ABORT

RESTART

ZOOM 128

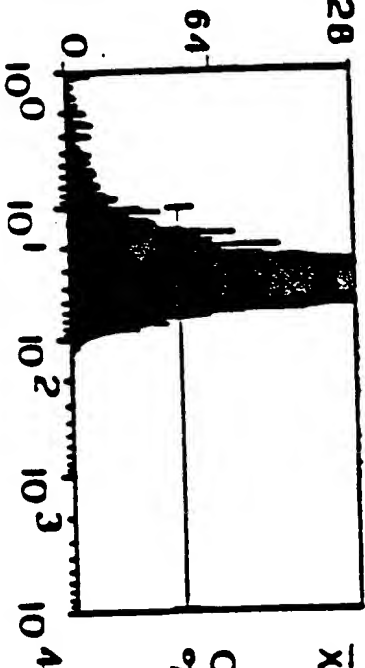
TYPE

GI

DOTS

RGD

STAT



$\bar{x} = 307.6$
 $CU = 13.3$
 $\sigma_0 = 91.8$

ACQ MODES

ALL CELLS

TOTAL

18,980

TOTAL RATE

0

ACCEPT

18,980

ELAPSED TIME

00:00:48

ZOOM 128

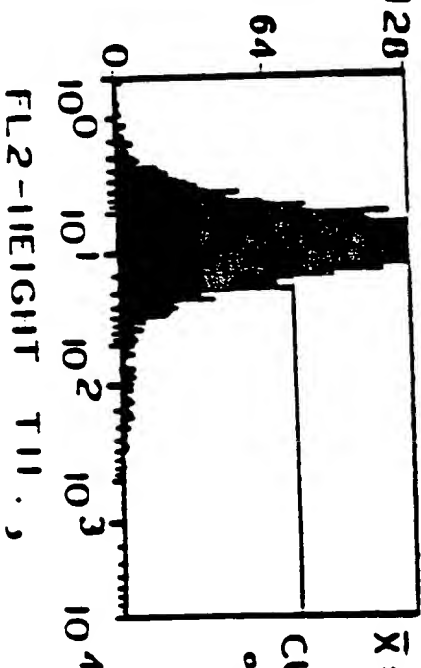
TYPE

GI

DOTS

RGD

STAT



$\bar{x} = 342.1$
 $CU = 19.4$
 $\sigma_0 = 79.1$

FIG. 2A

ACO CMD INST-CTRL GATES FORMAT PROTO SAVE

ACQUIRE

BEGIN

FINISH

ABORT

RESTART

ZOOM 128

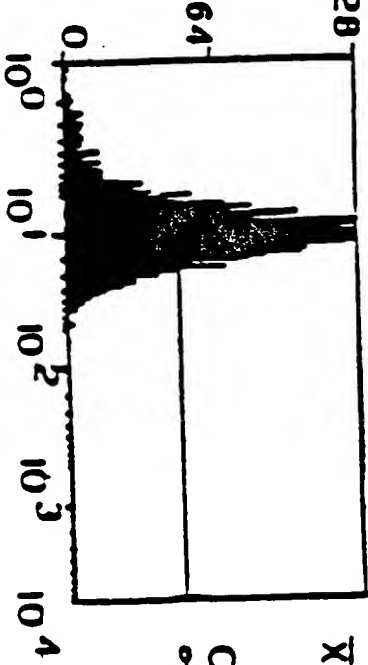
TYPE

CI

DOTS

RGN

STAT



$\bar{X} = 337.1$
 $CU = 12.8$
 $\sigma_0 = 84.7$

ACQ MODES

ALL CELLS

TOTAL

13,740

TOTAL RATE

0

ACCEPT

13,740

ZOOM 28

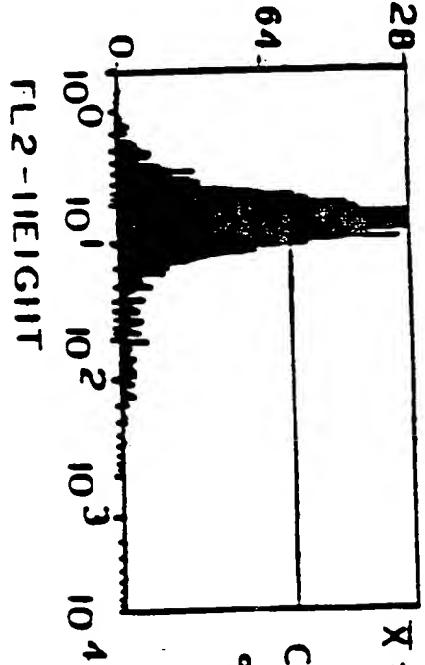
TYPE

CI

DOTS

RGN

STAT



$\bar{X} = 326.0$
 $CU = 21.5$
 $\sigma_0 = 68.6$

FIG. 2B

ELAPSED TIME

00:00:35

09056072.040798

FIG. 3A'

PBMC WITHOUT LO-CD2- α

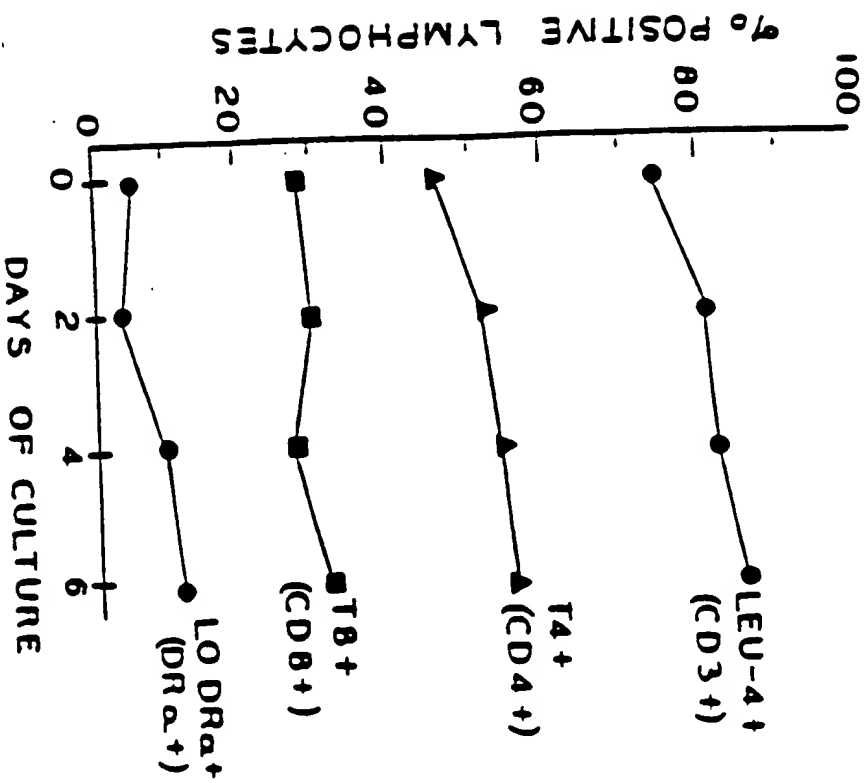


FIG. 3B

PBMC WITH LO-CD2- α

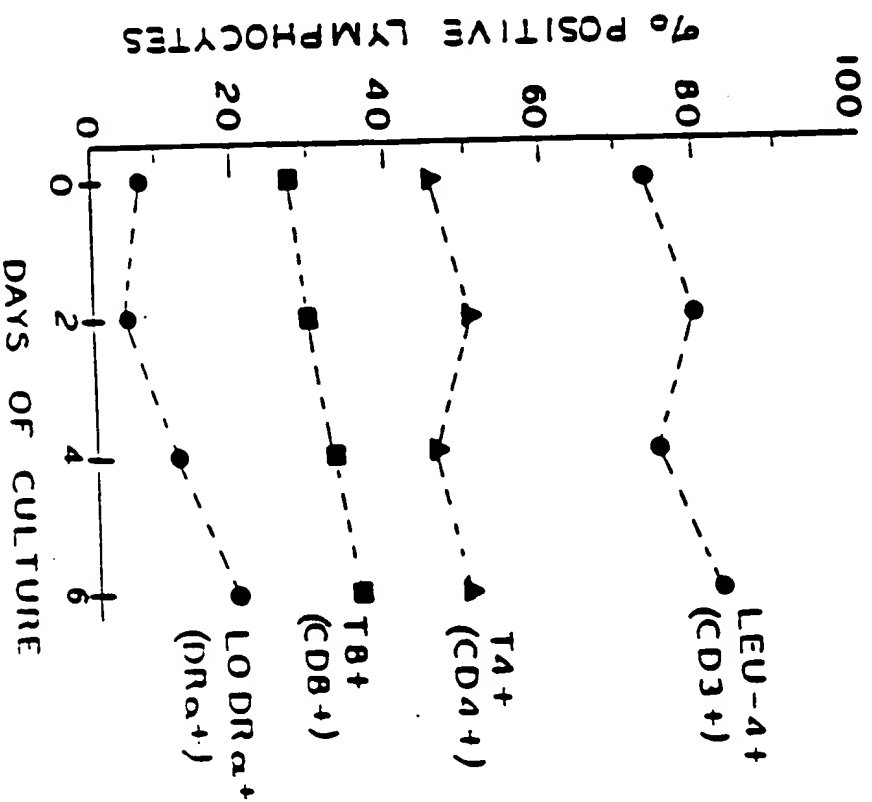
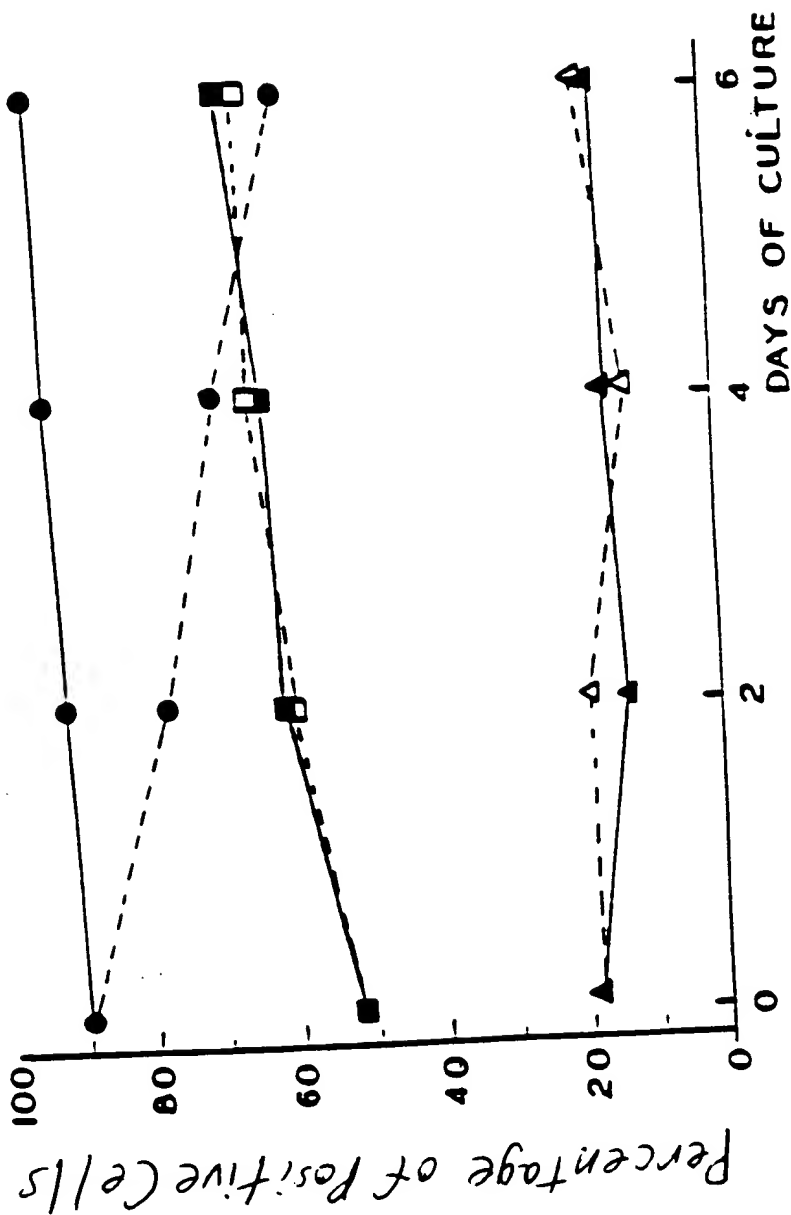


FIG. 4

PBMC: PHENOTYPICAL ANALYSIS



LEU 5b+ (CD2+)

WITHOUT mAb

WITH mAb

T4+ (CD4+)

WITHOUT mAb

WITH mAb

T8+ (CD8+)

WITHOUT mAb

WITH mAb

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Effects of LO-CD2a on Resting Cells during MLC

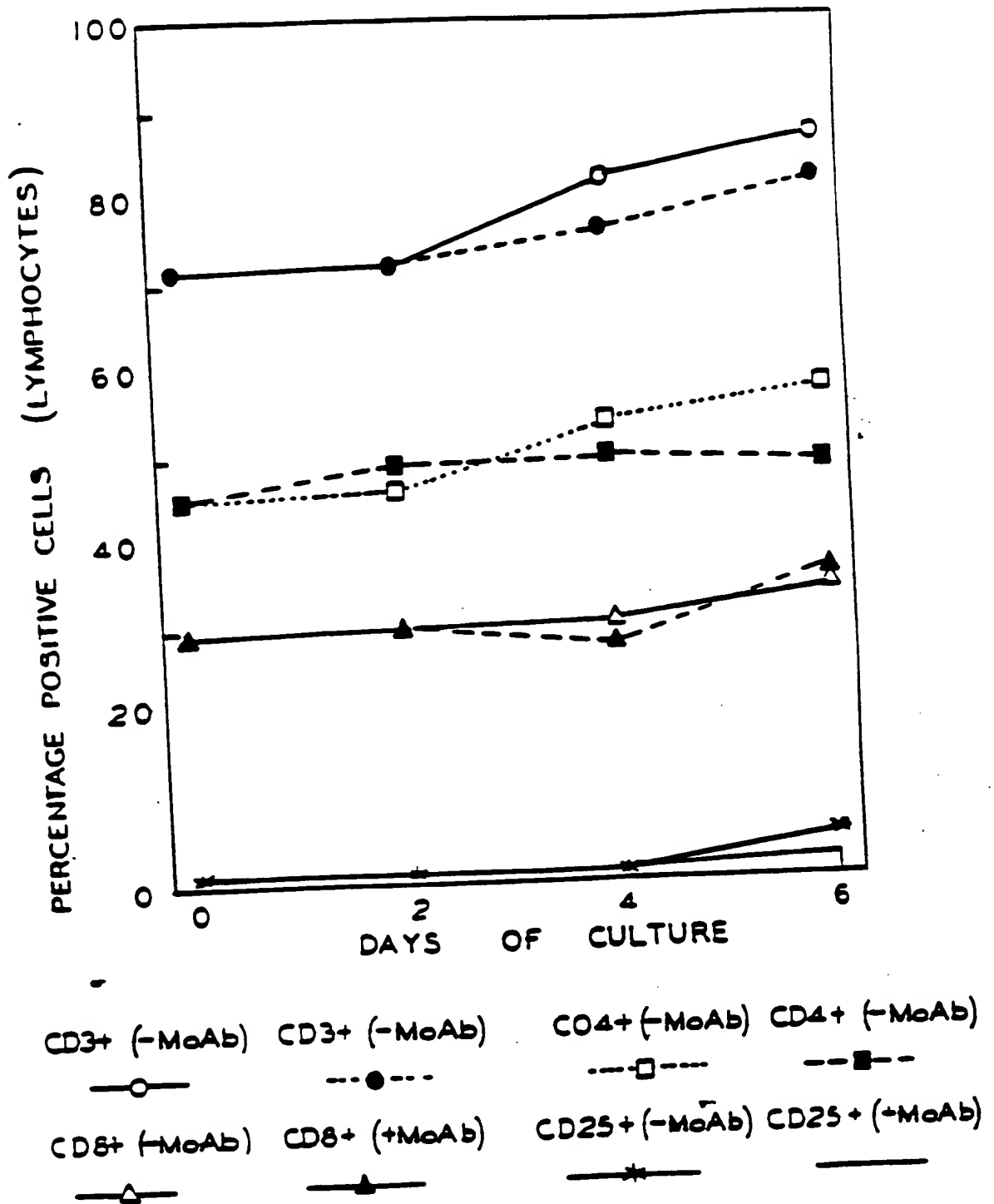


FIG. 8A

862040" 22095060

FIG. 5B

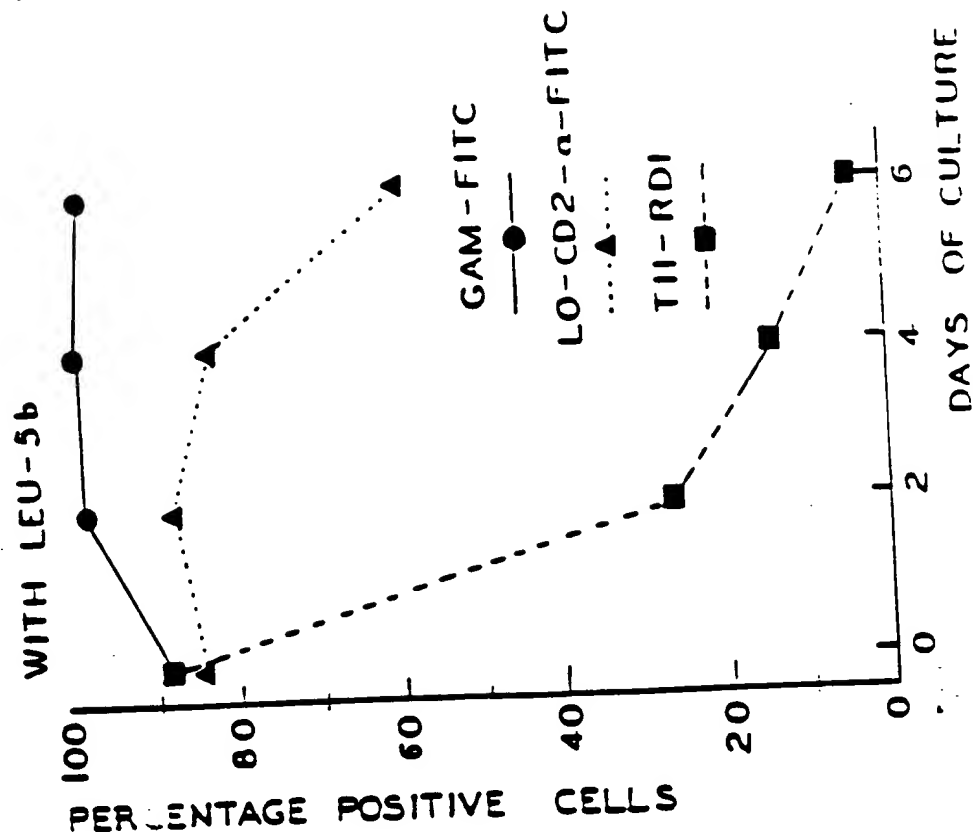
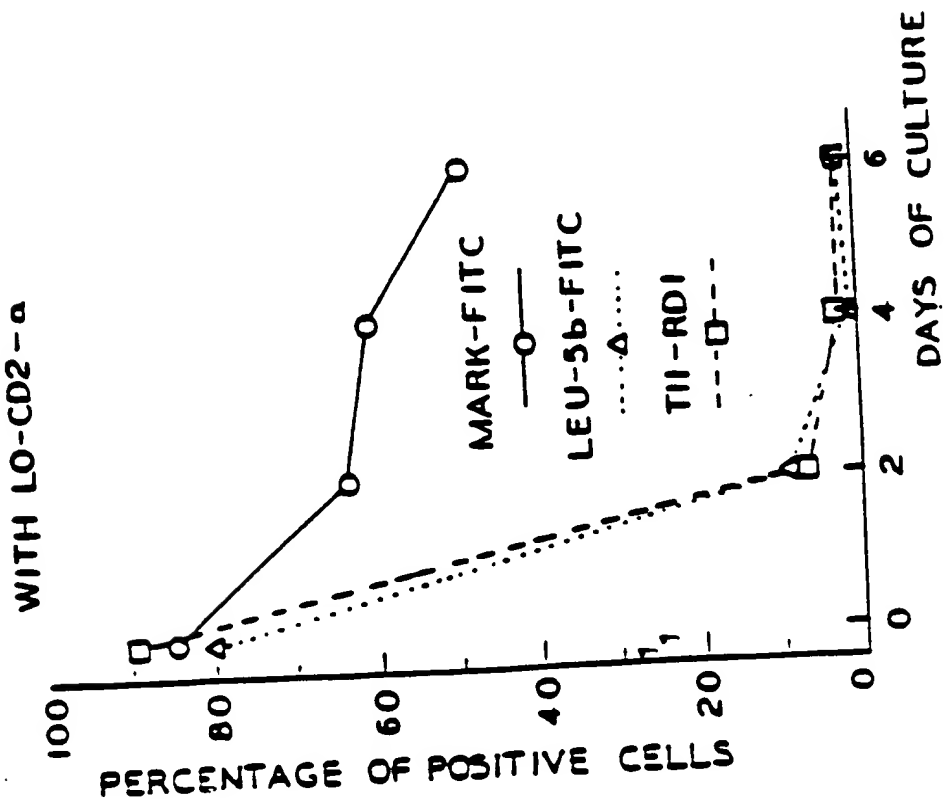


FIG. 5A



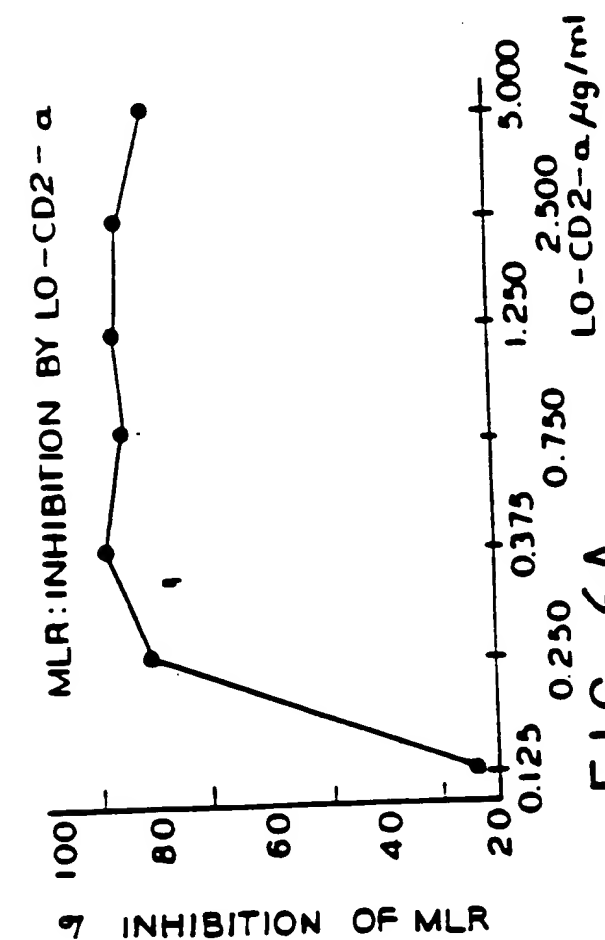


FIG. 6A

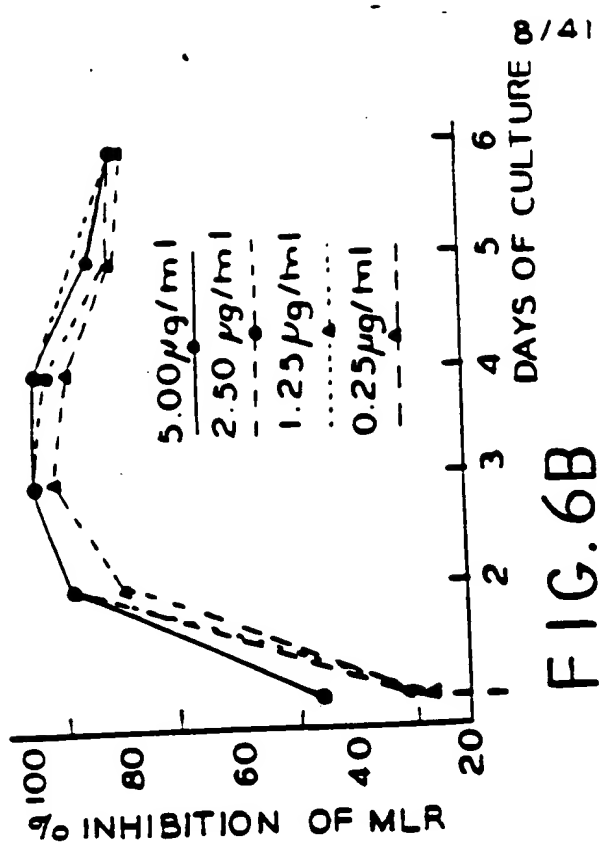


FIG. 6B

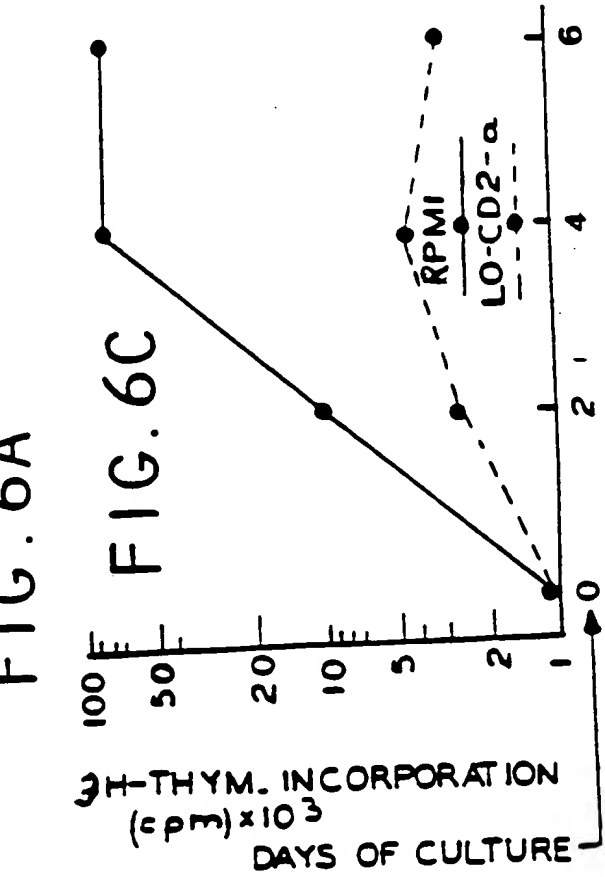


FIG. 6C

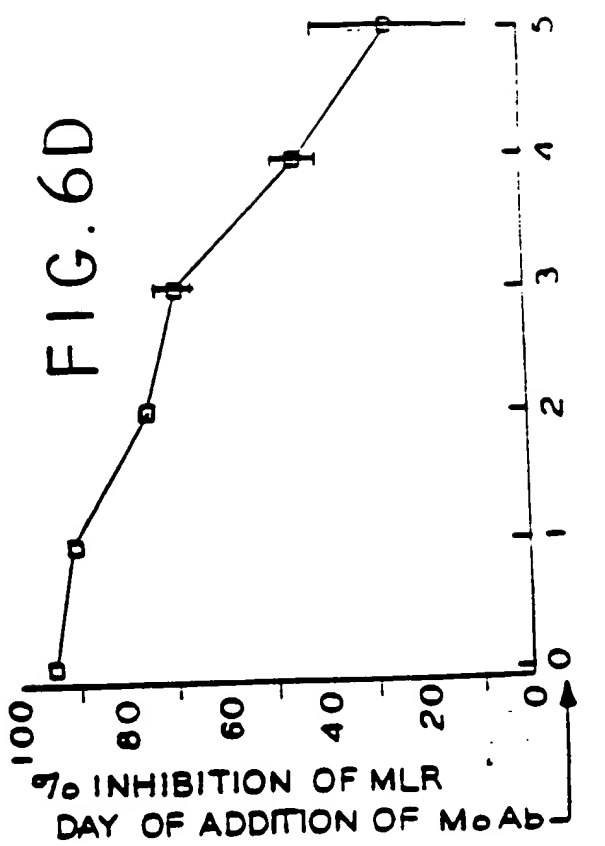


FIG. 6D

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MLC: LEU-5b+ (CD2+) CELLS

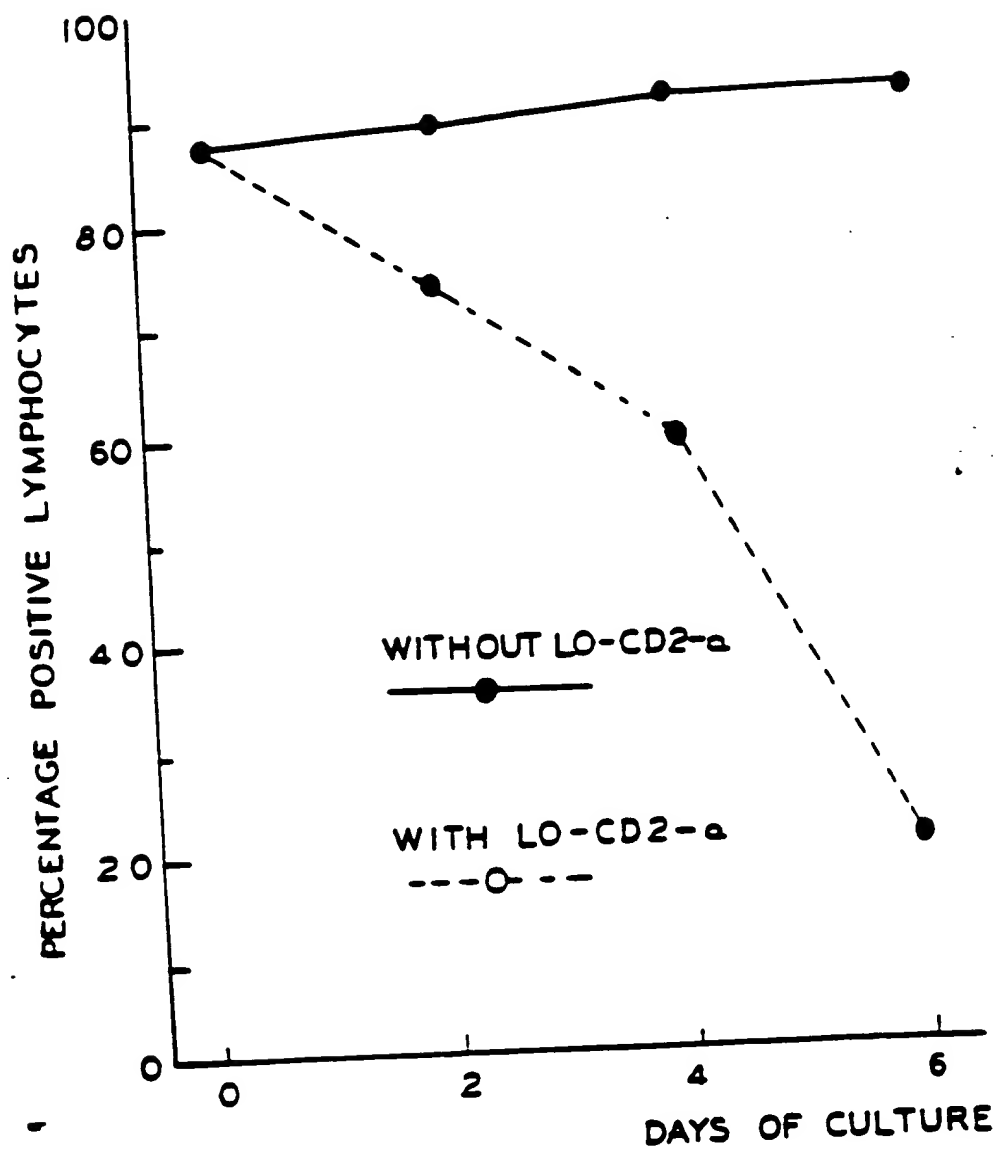


FIG. 8B

862040" 24095060

Number of blast cells per 25,000 events analyzed

FIG. 7

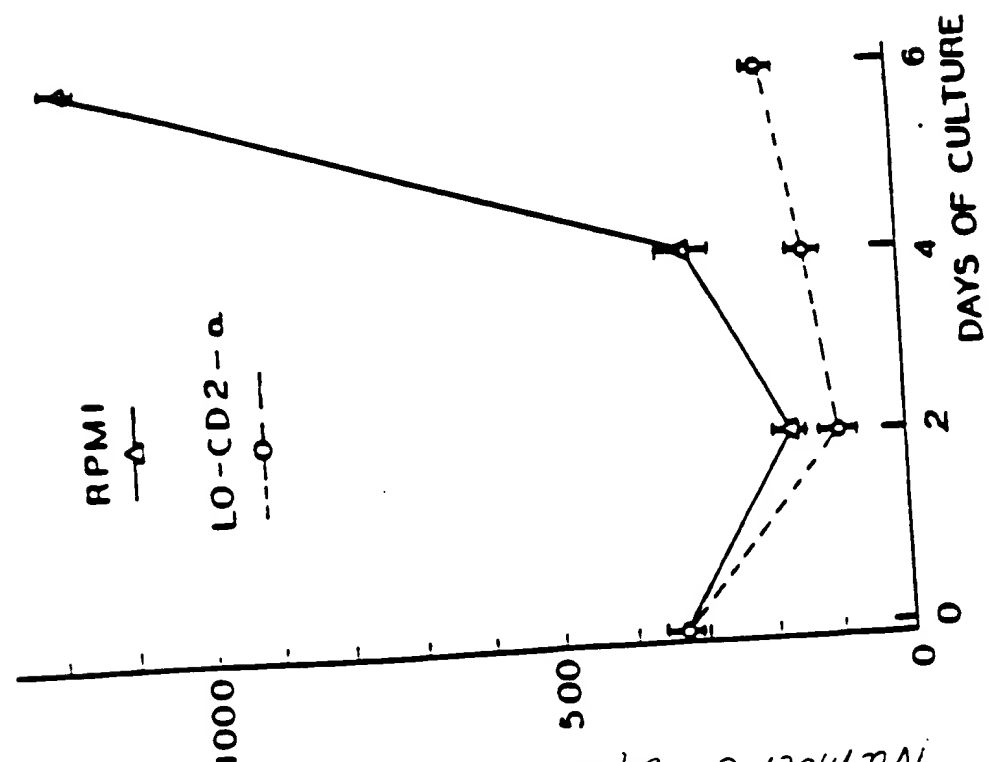
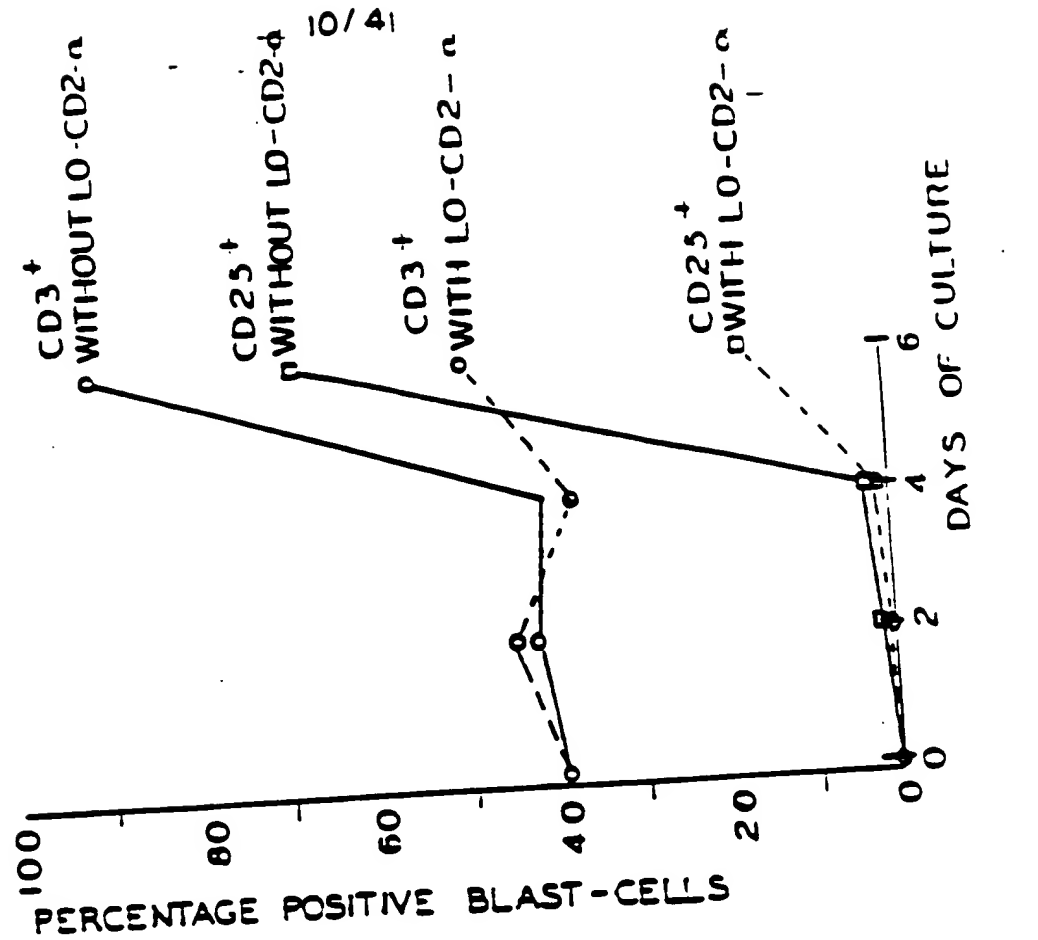
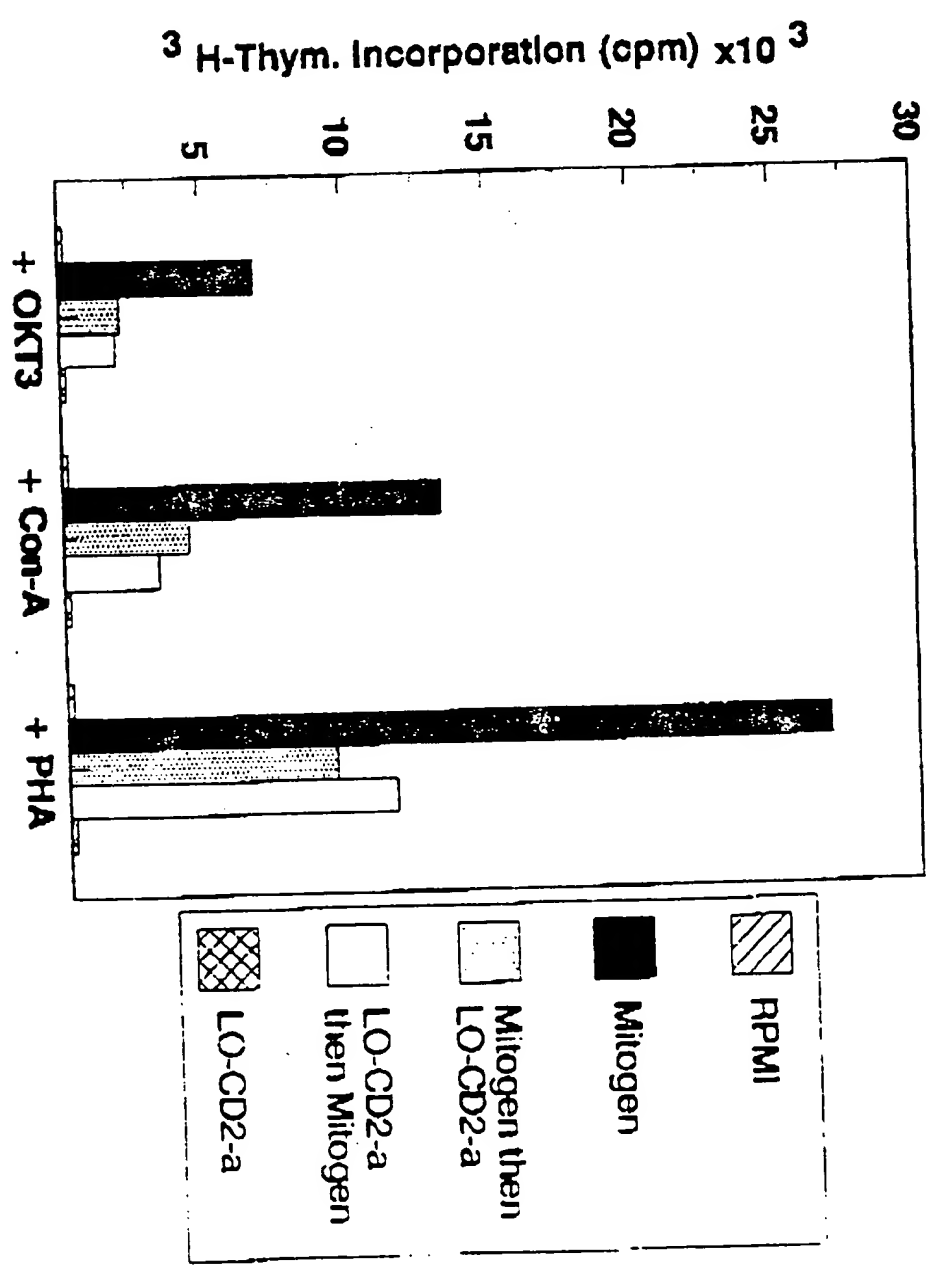


Figure 9

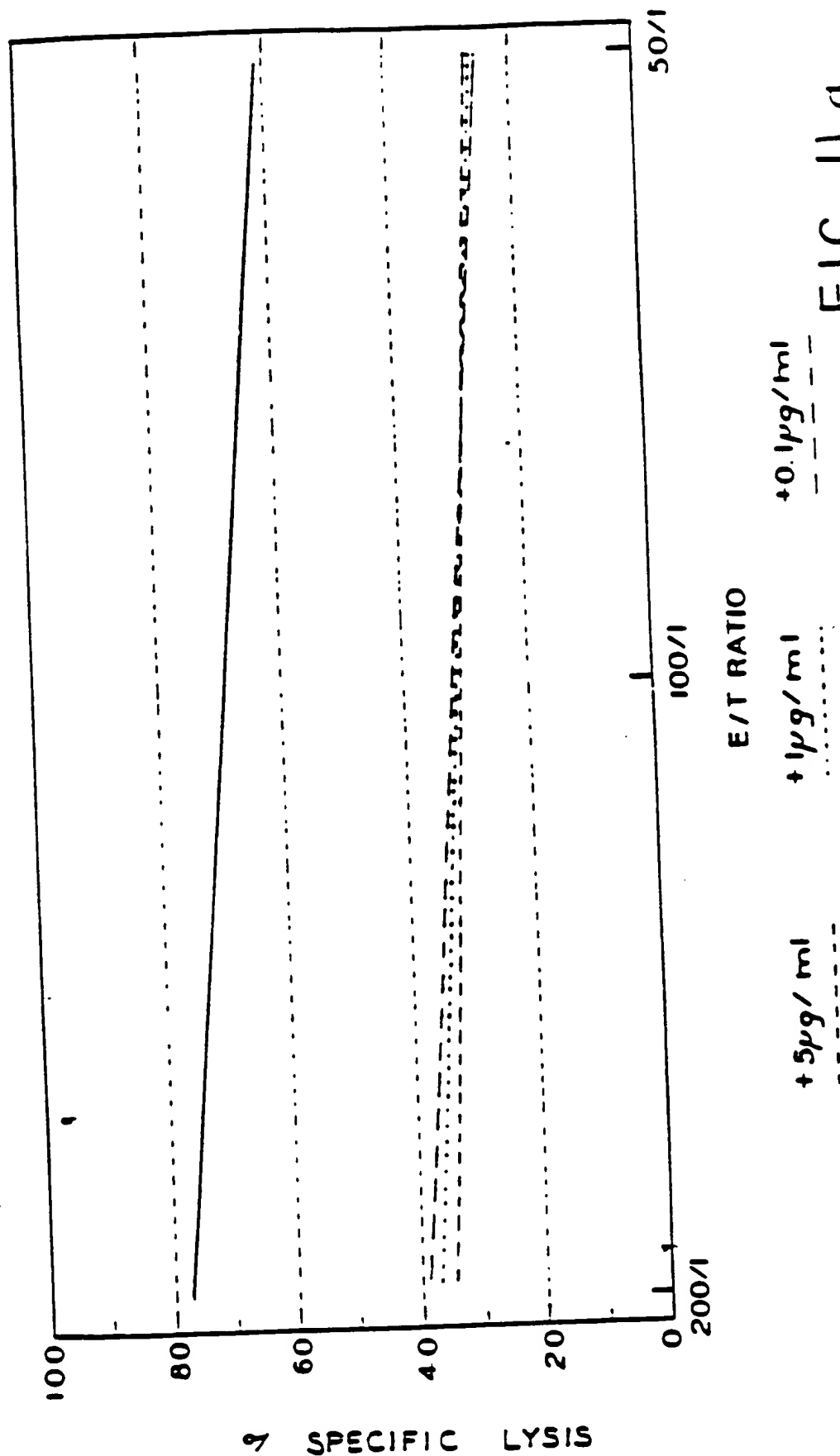
Effects of LO-CD2-a on mitogen-stimulated PBMC



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FIC. 11 d

864040" 22095060

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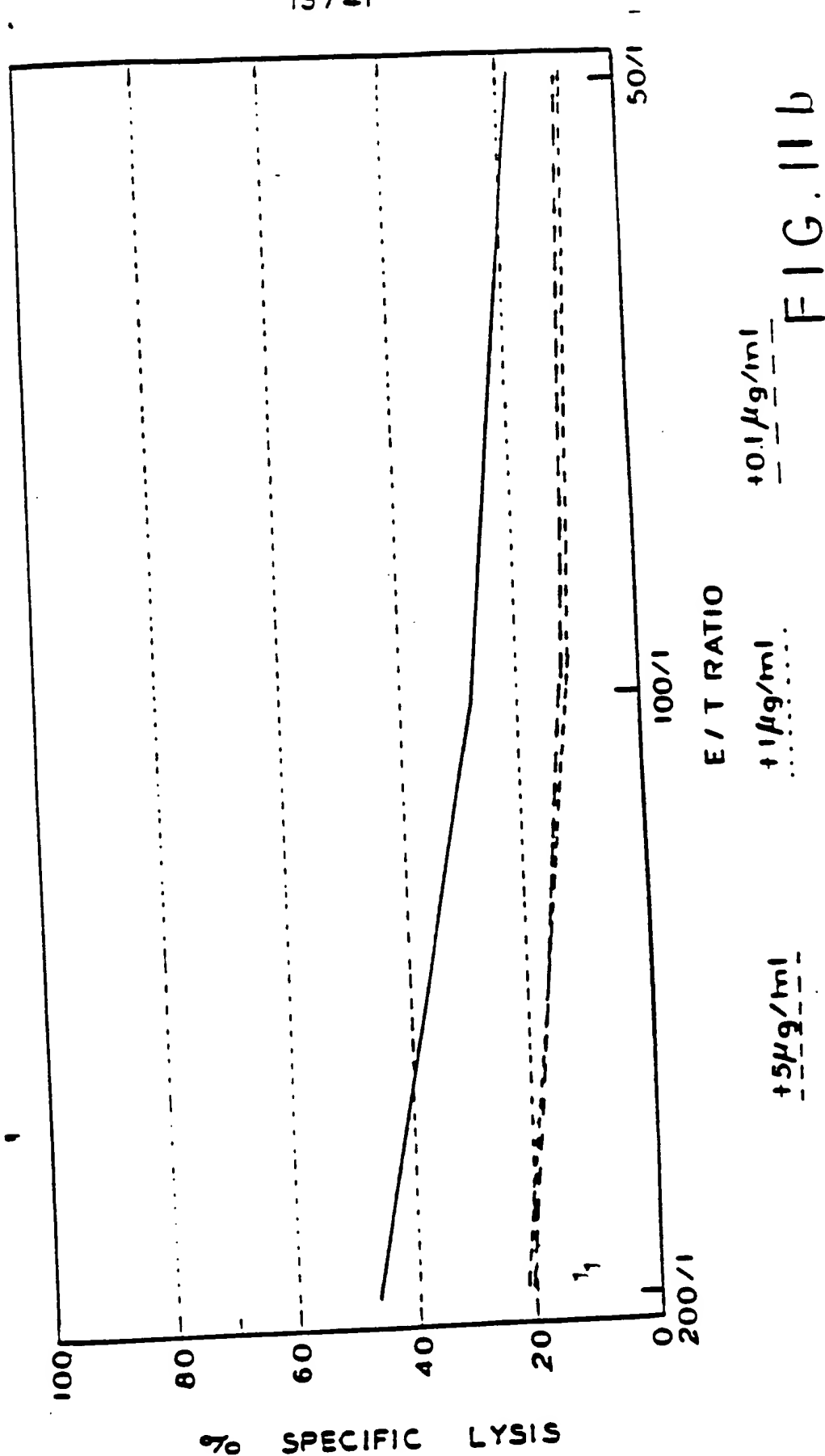


FIG. 11b

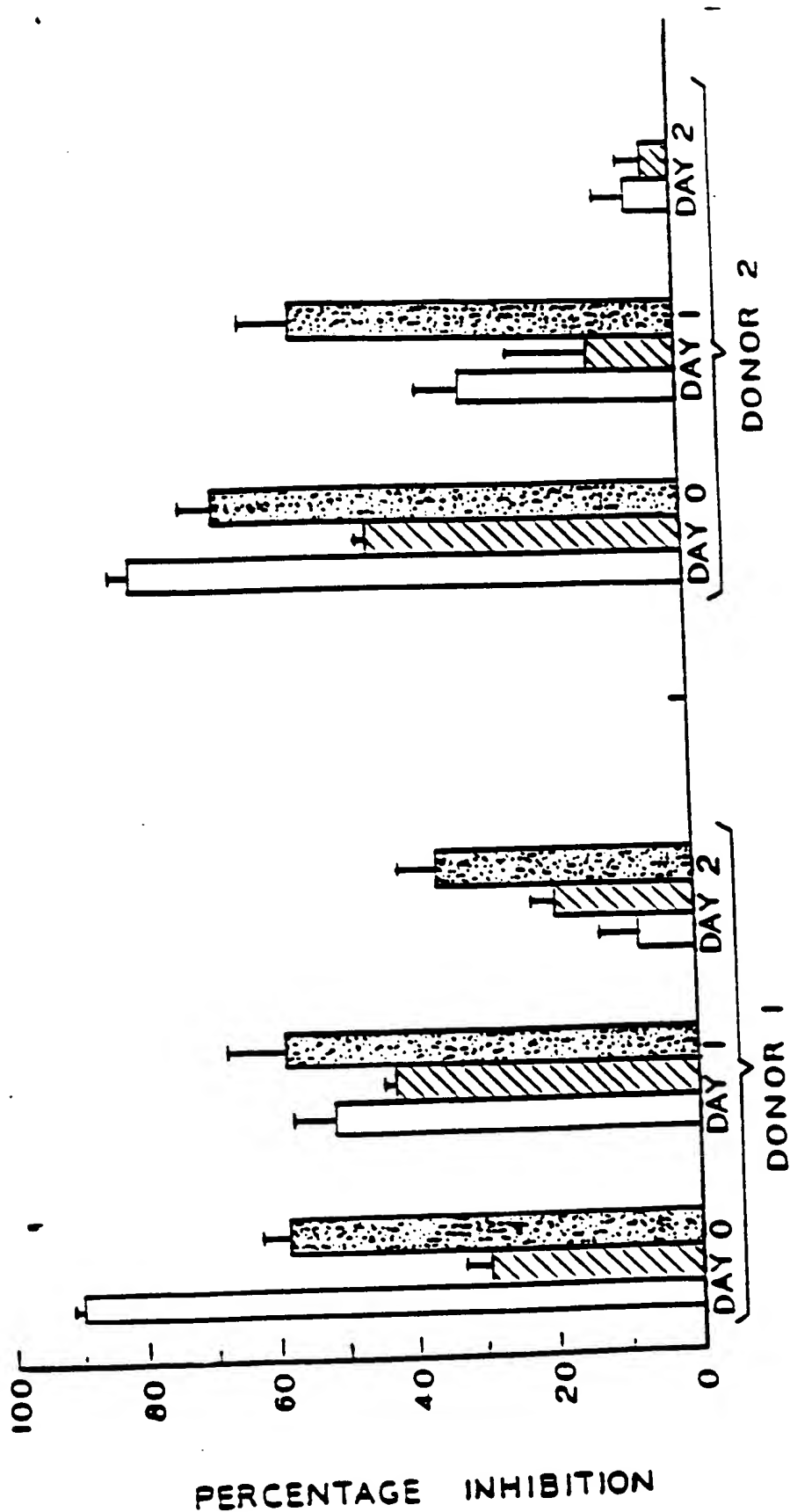


FIG. 10

LYMPHOCYTE COUNTS

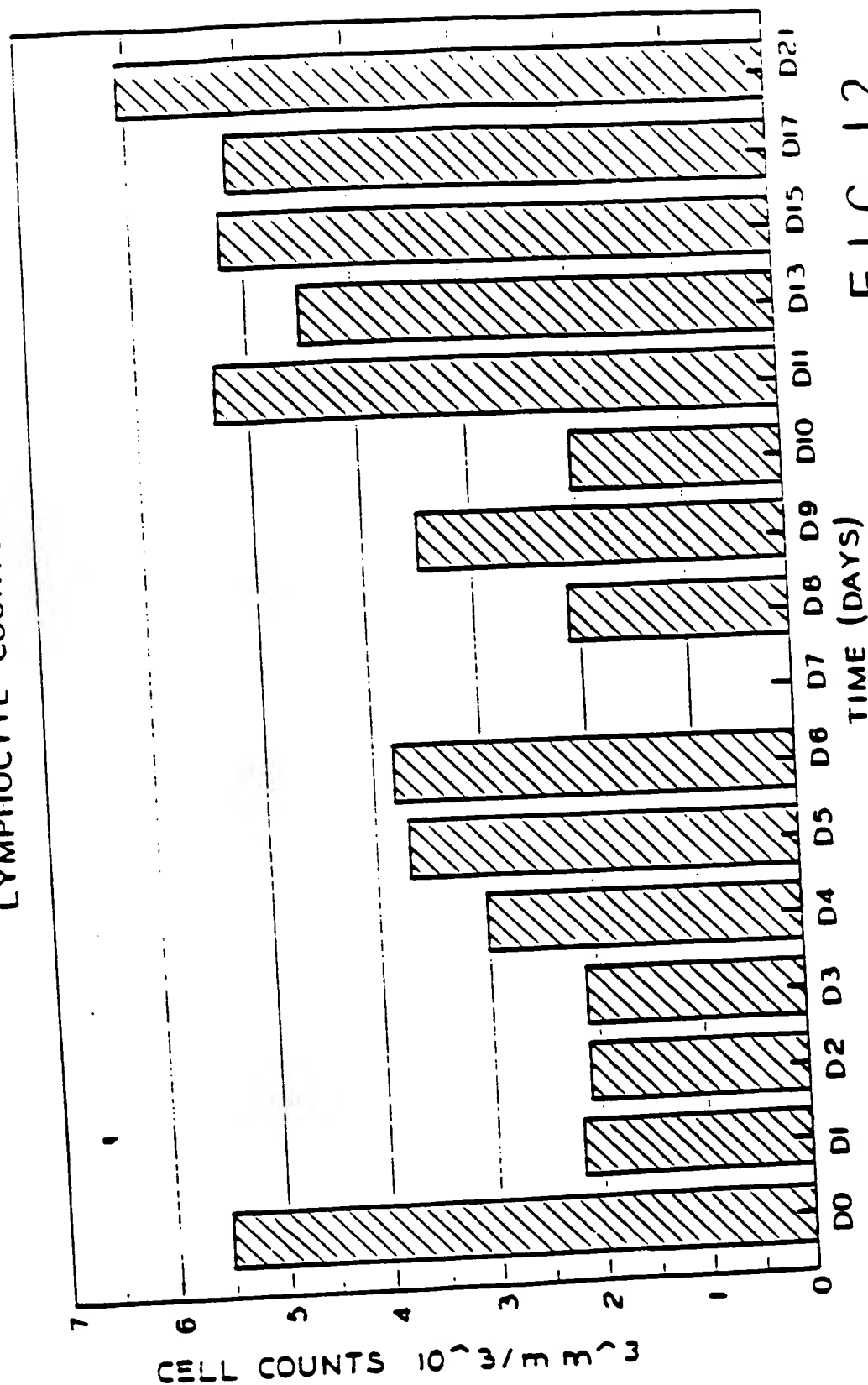


FIG. 12

LOCD2 20mg/DAY
D0-D9

CELL POPULATIONS FIG. 13
 LOCD2: 20mg/DAY
 D0-D9

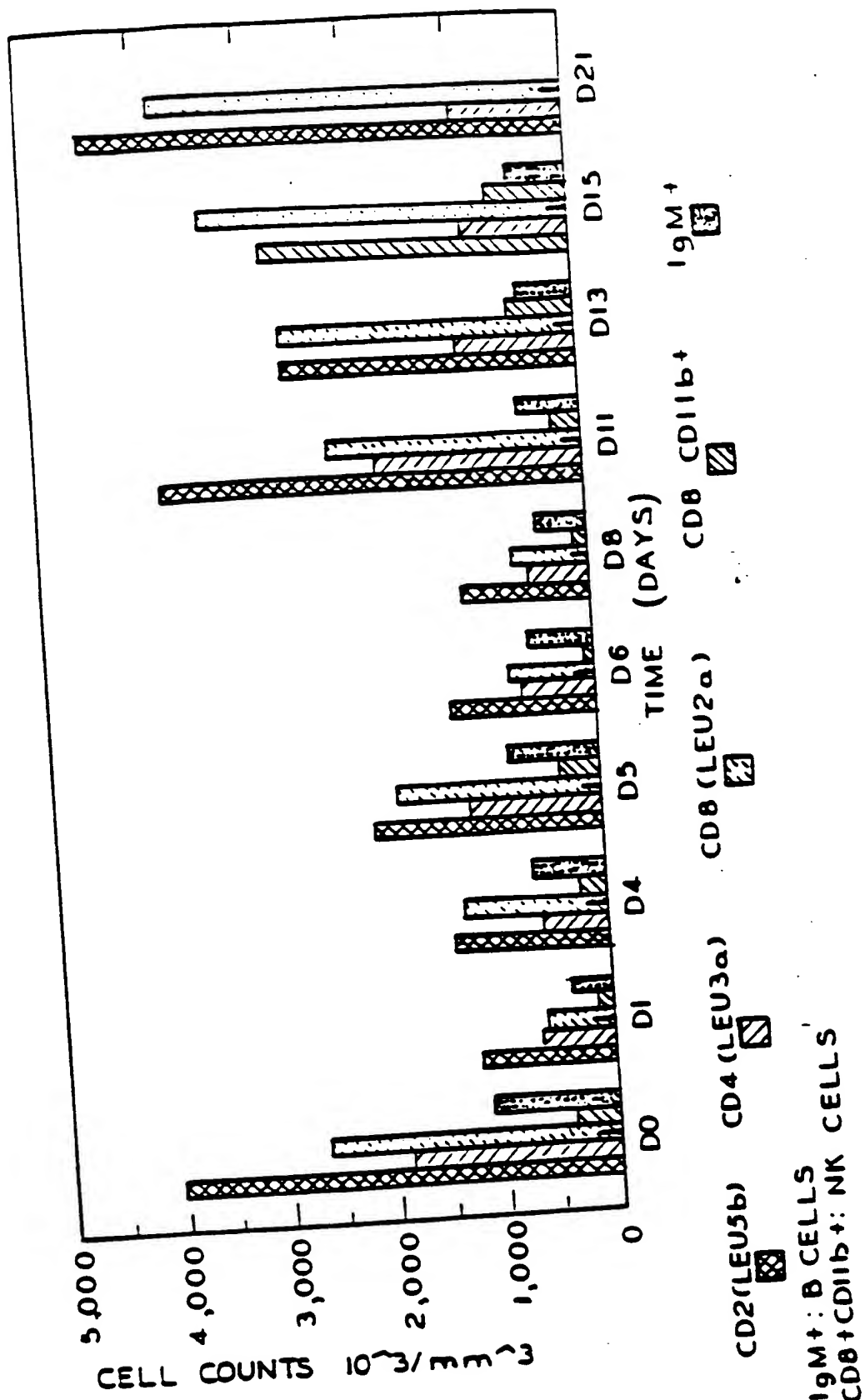
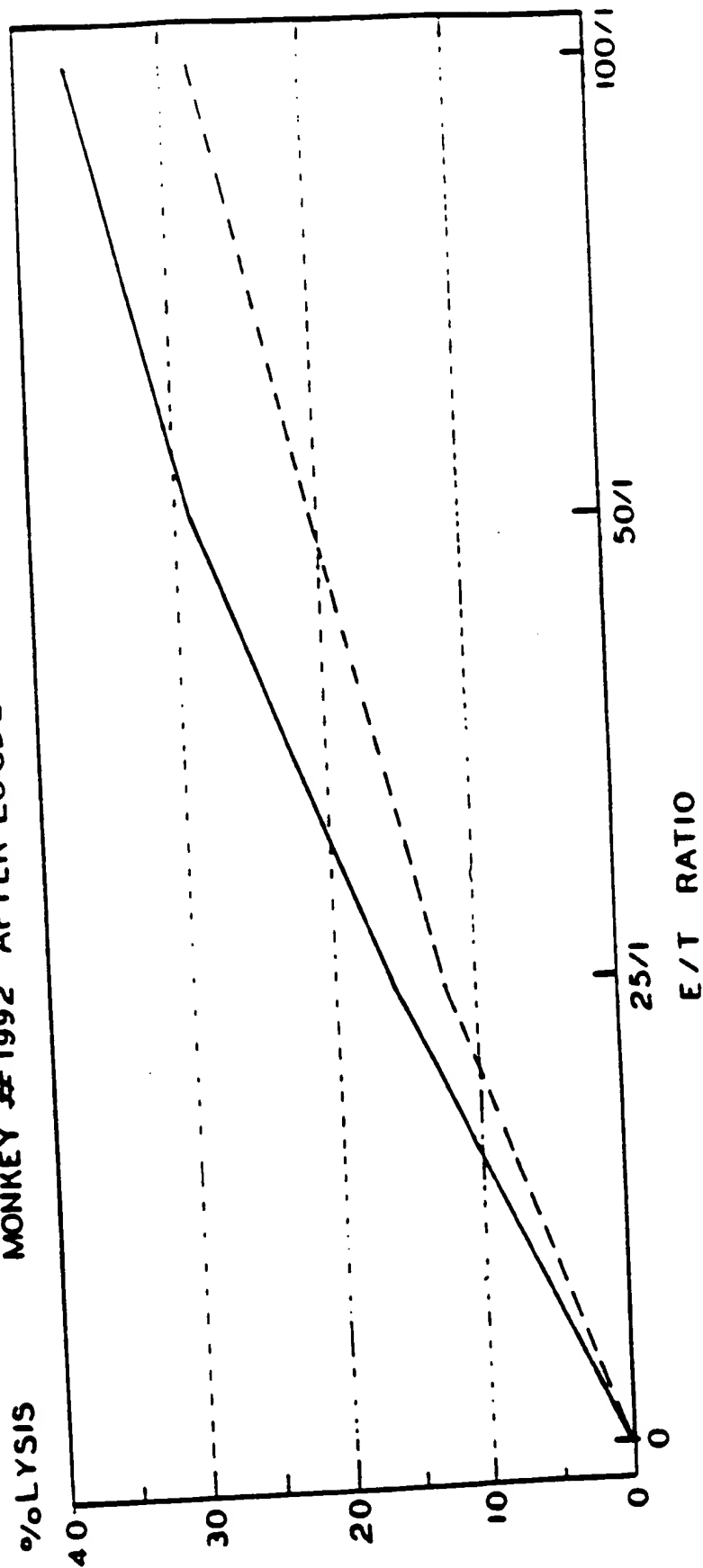


FIG. 14

NK ACTIVITY

MONKEY #1992 AFTER LOCD2 10 DAYS



DAY 22 DAY 11

LOCD2- α SERUM CONCENTRATION
CYNOMOLGUS MONKEY 1992

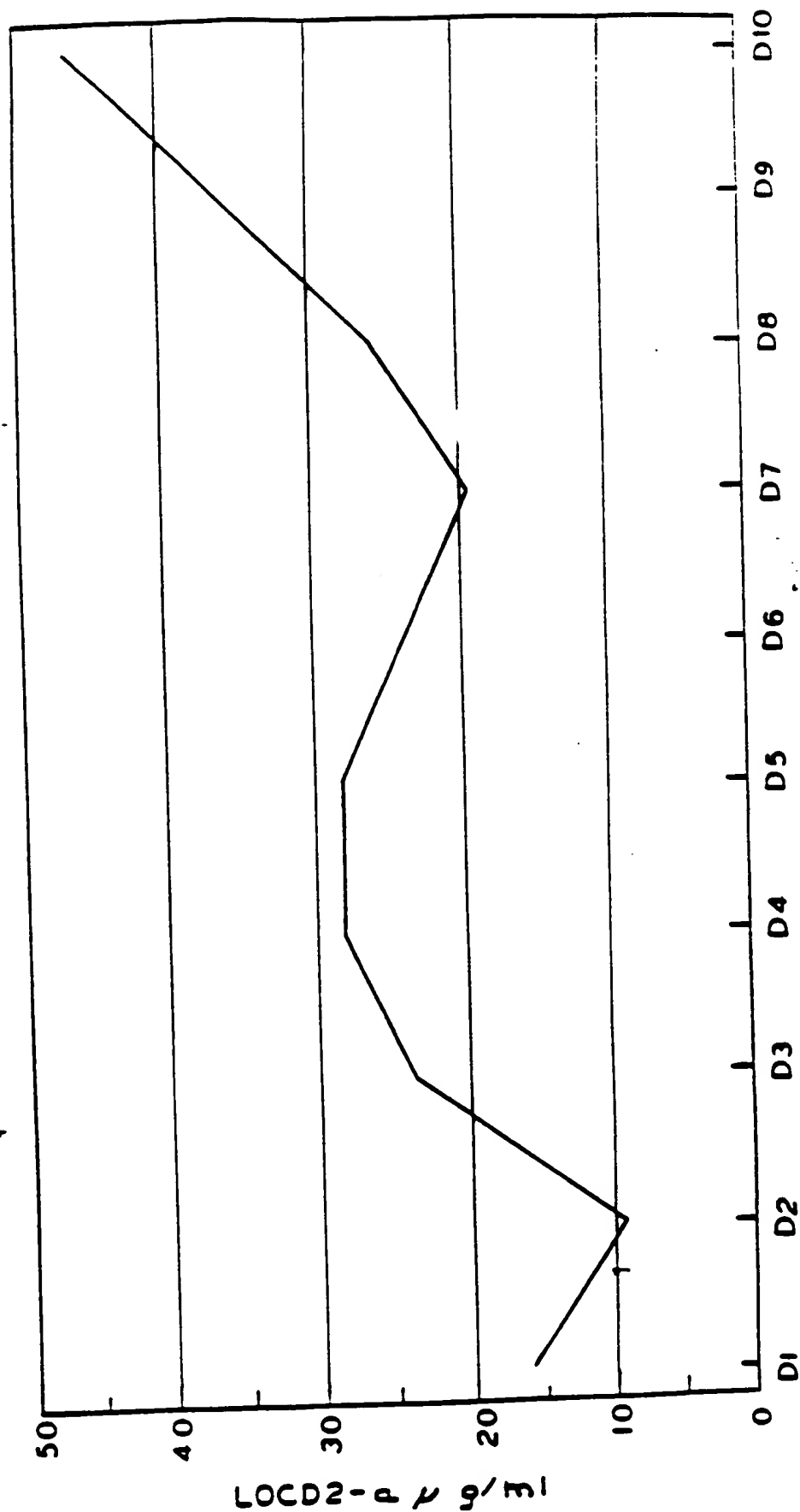


FIG. 15

FIG. 16

19G ANTIBODY ANTI-LOCD2a
CYNOMOLGUS MONKEY

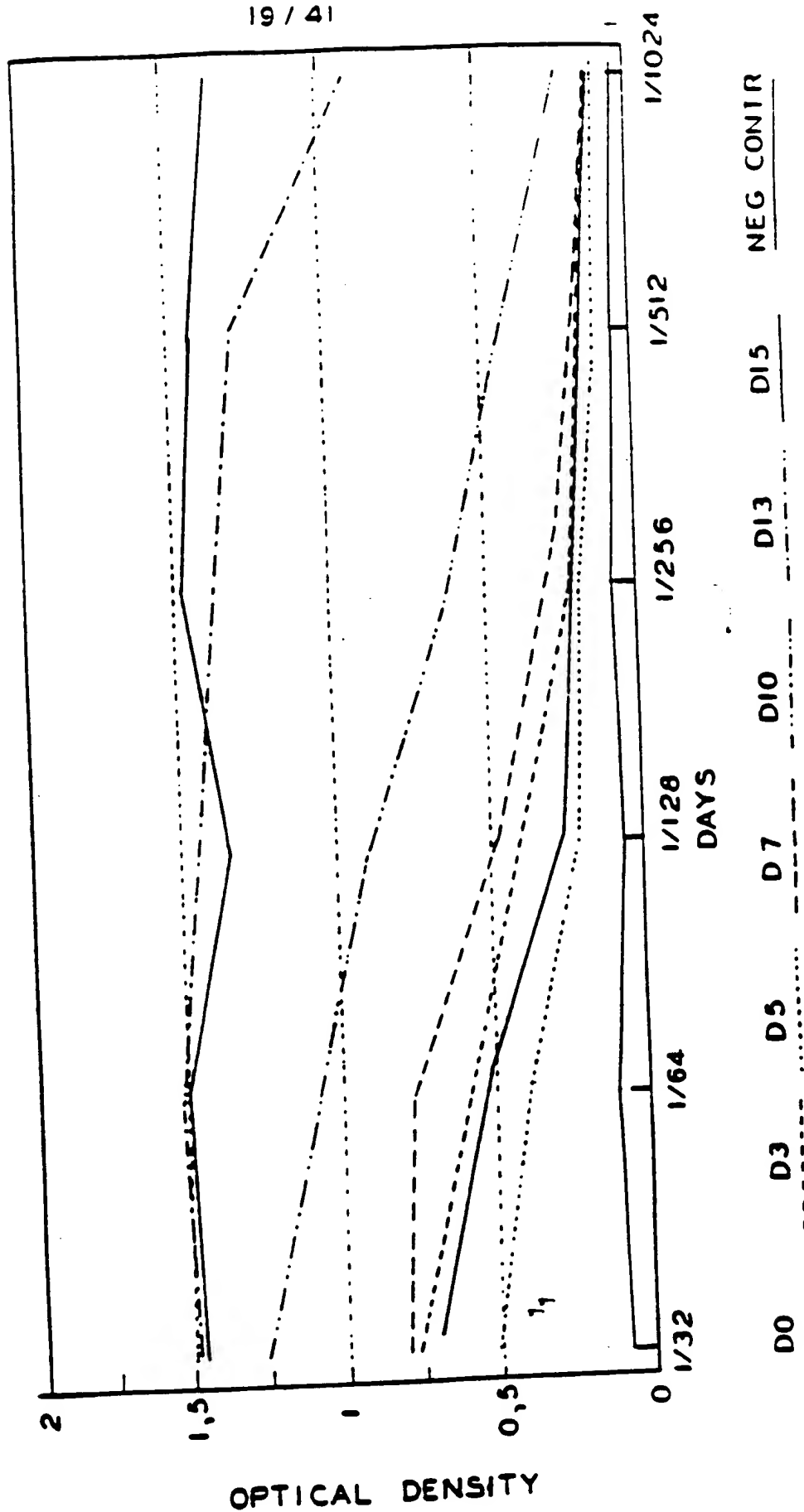


FIG. 17B
LO-CD2- α : SERIC DOSAGES

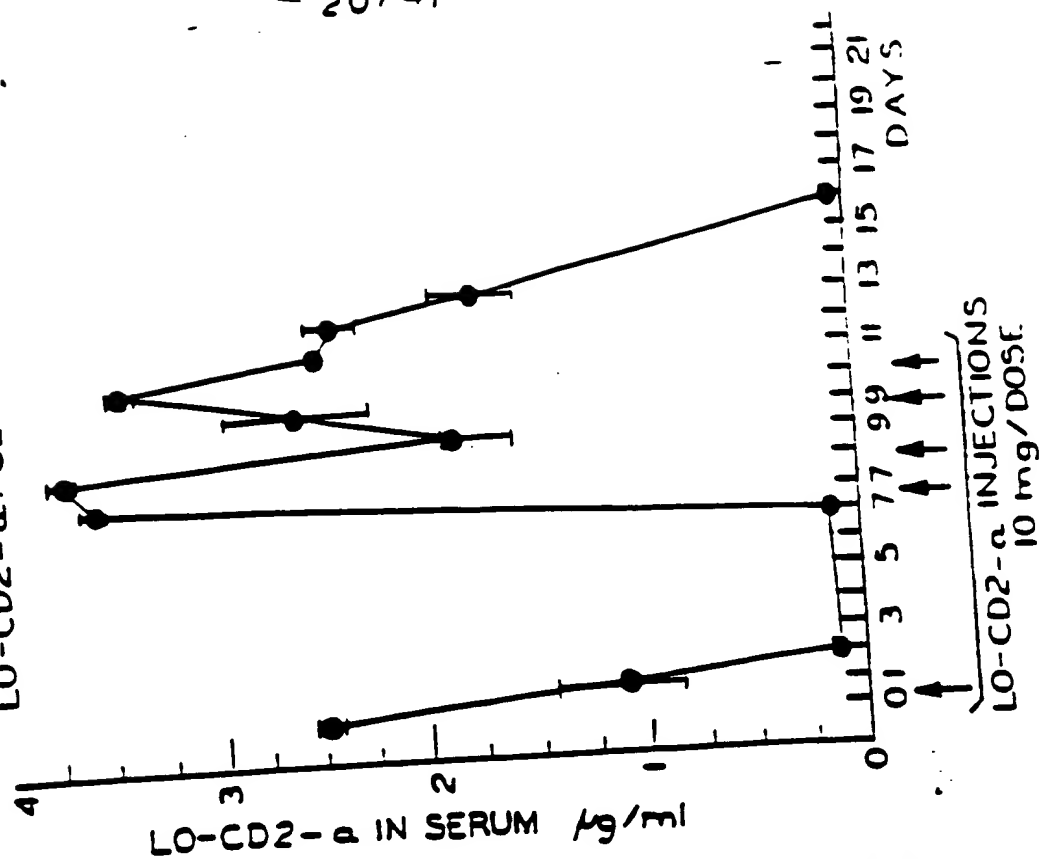


FIG. 17A
PHENOTYPICAL MARKERS

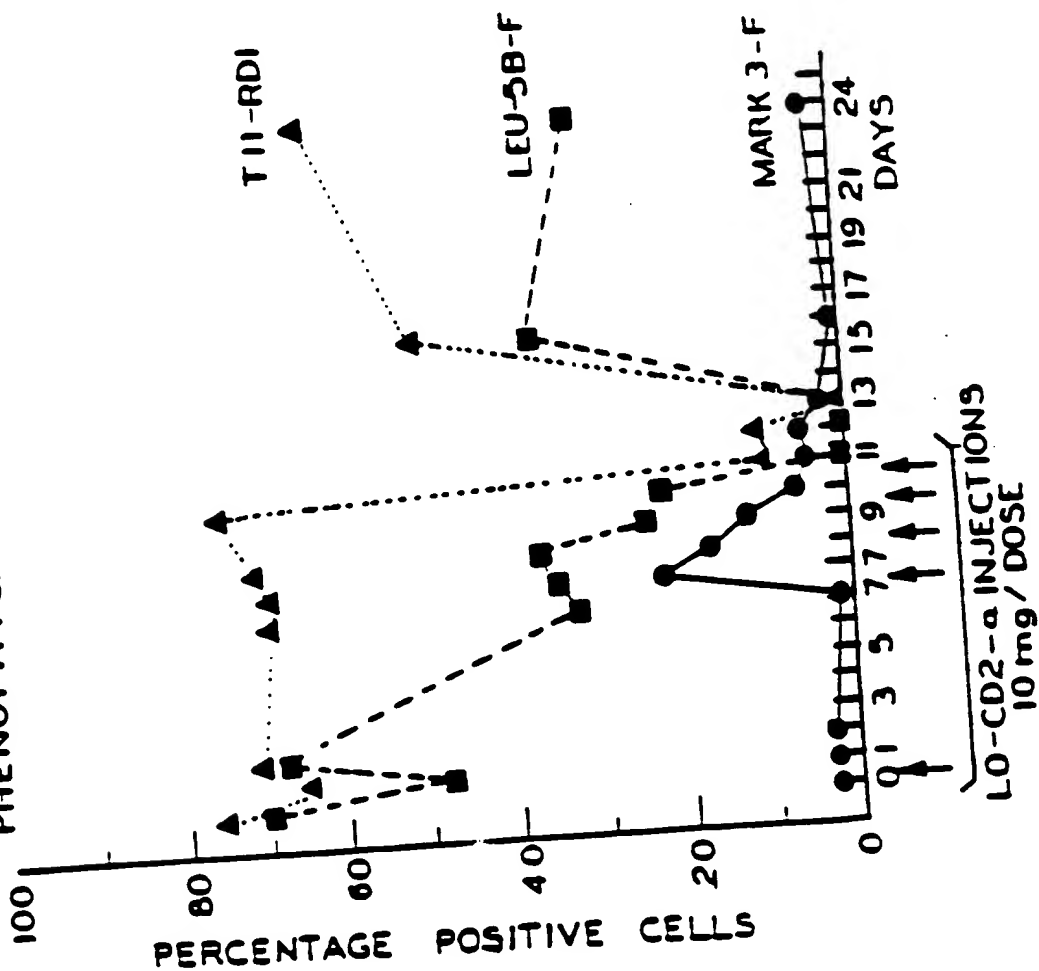


FIG. 18A

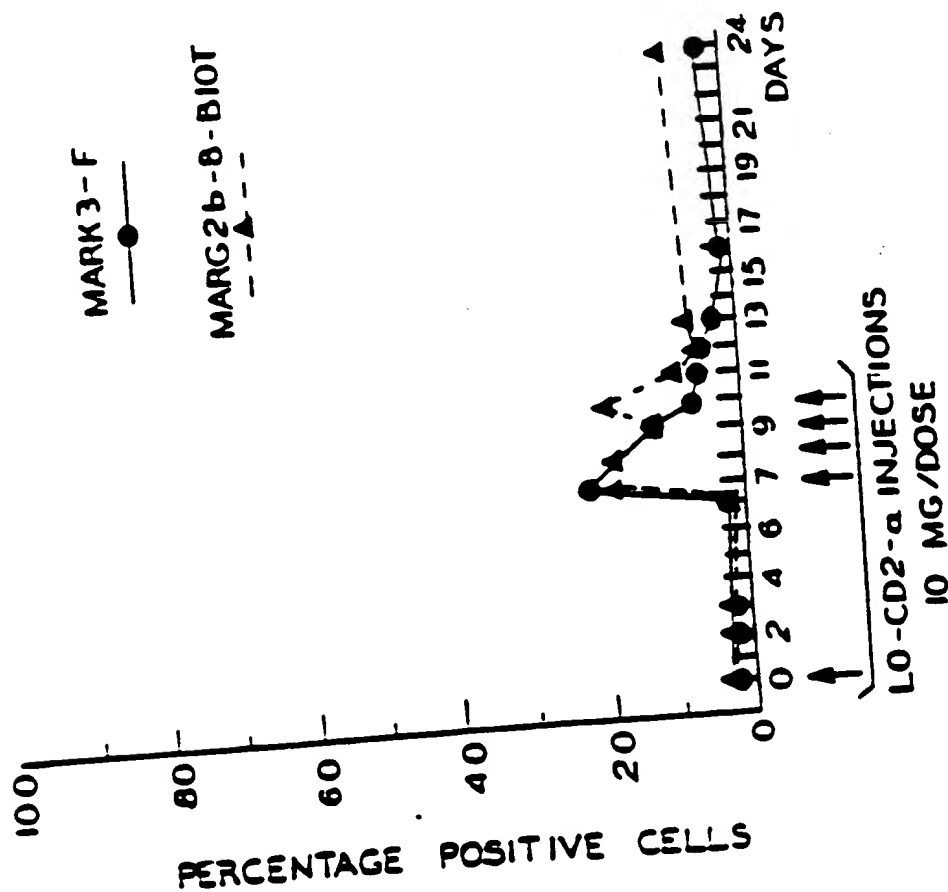


FIG. 18B

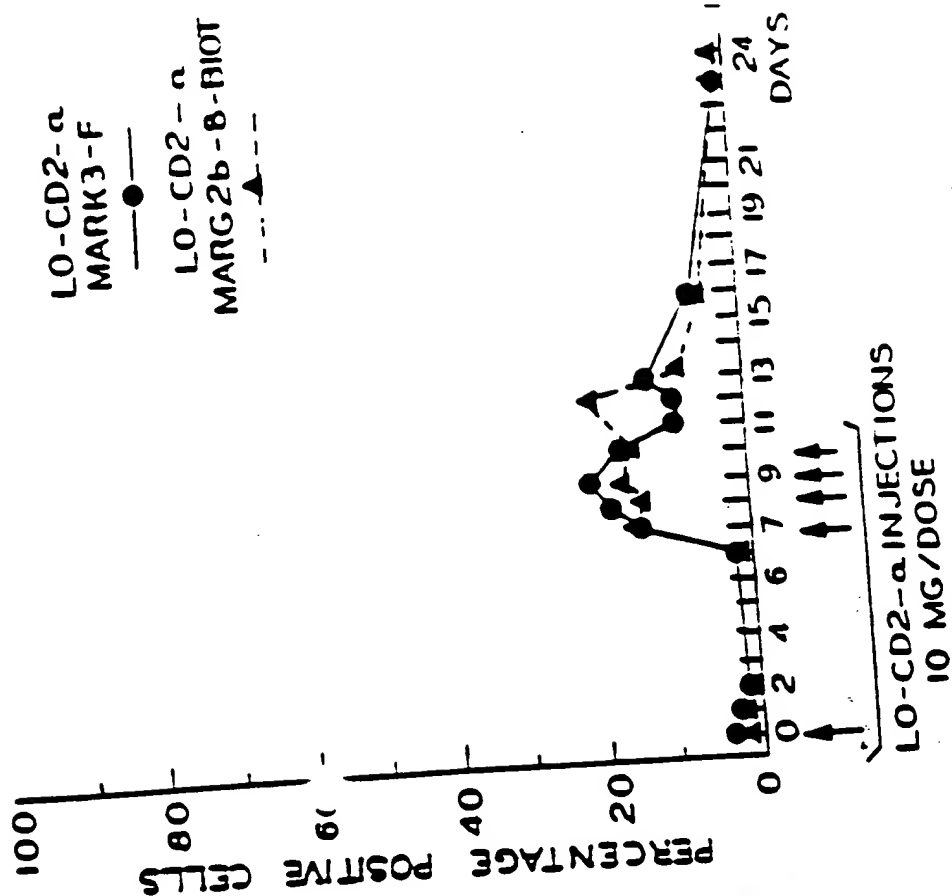
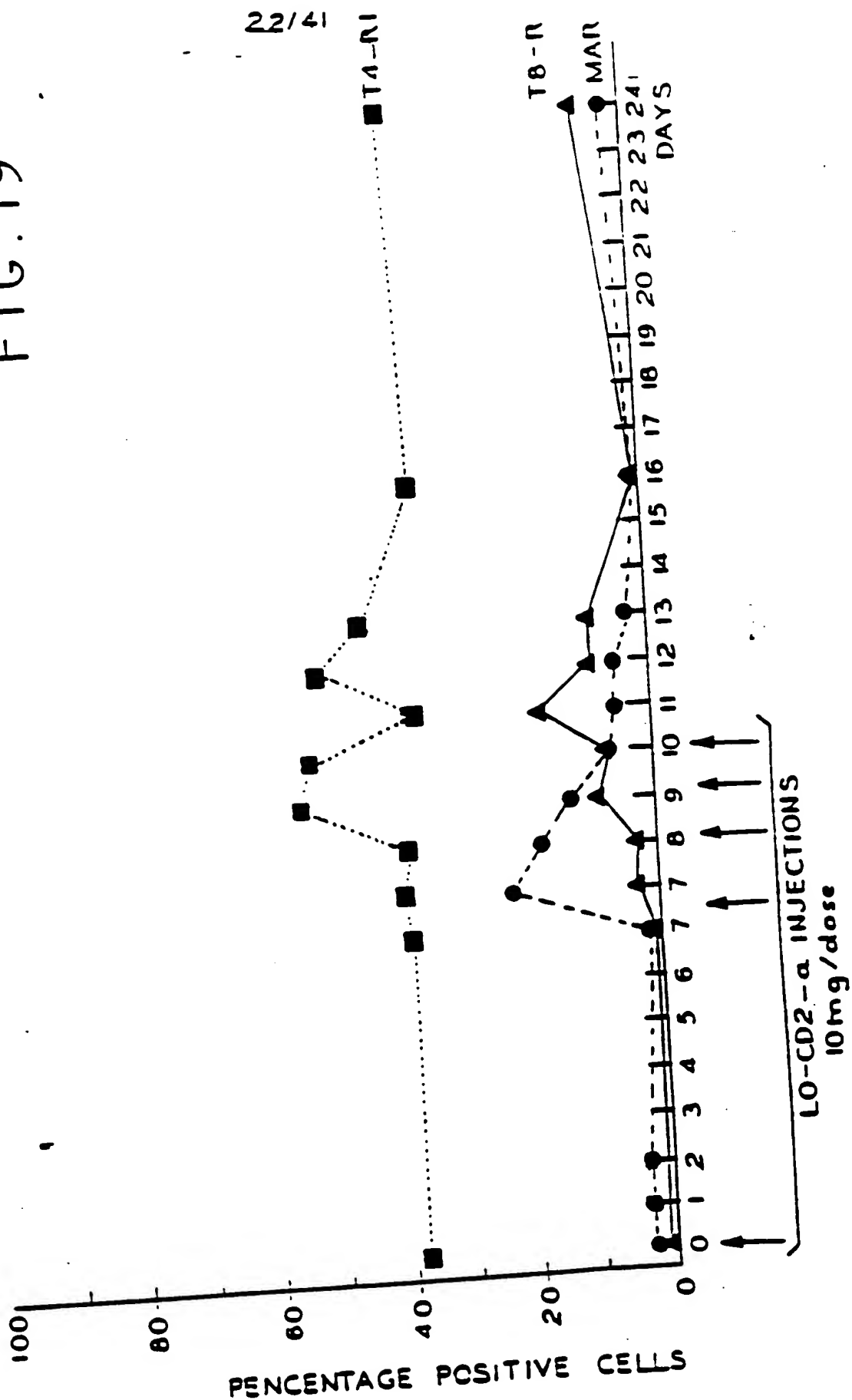


FIG. 19



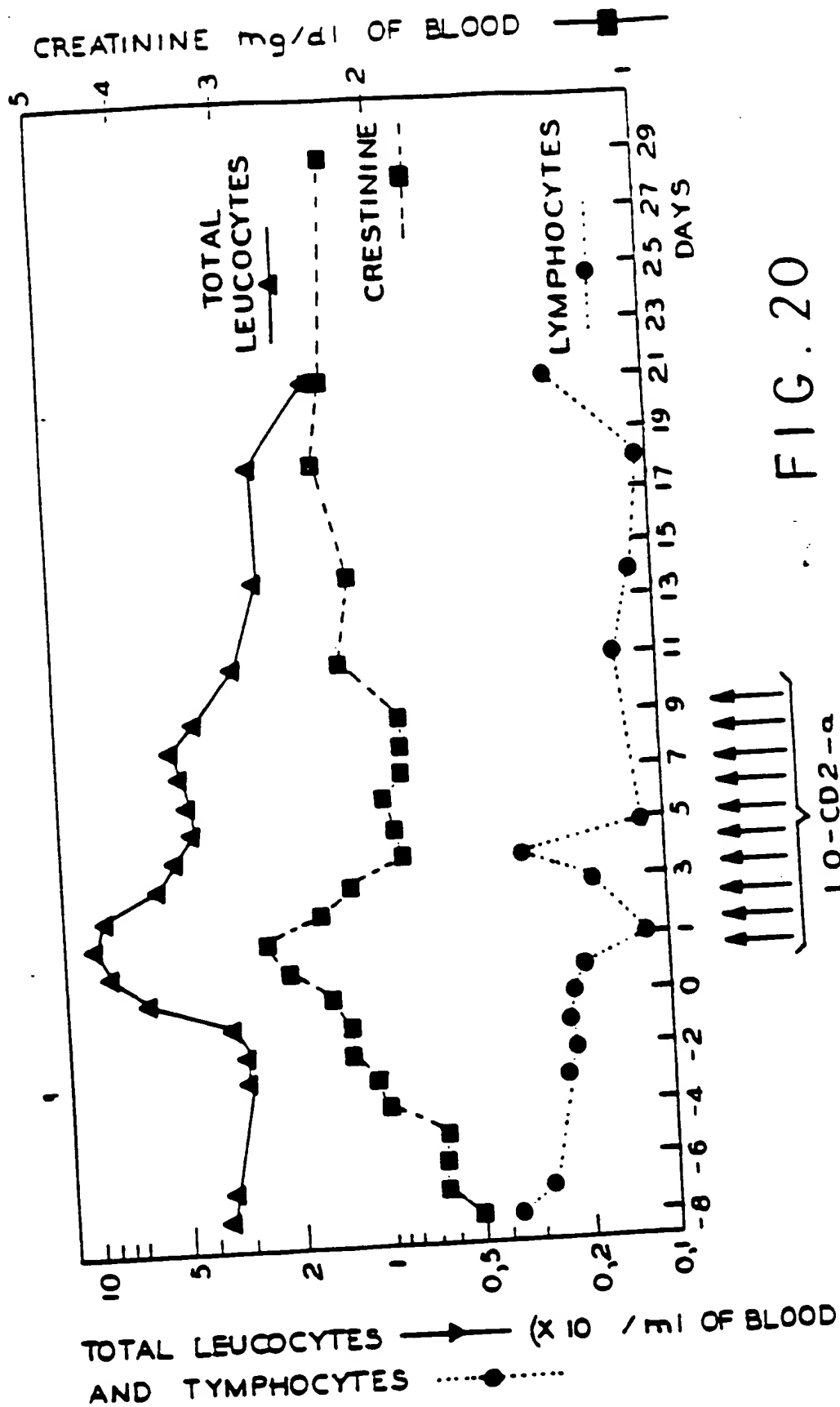


FIG. 20

LO-CD2- α IN KIDNEY ALLOGRAFT REJECTION

FIG. 21

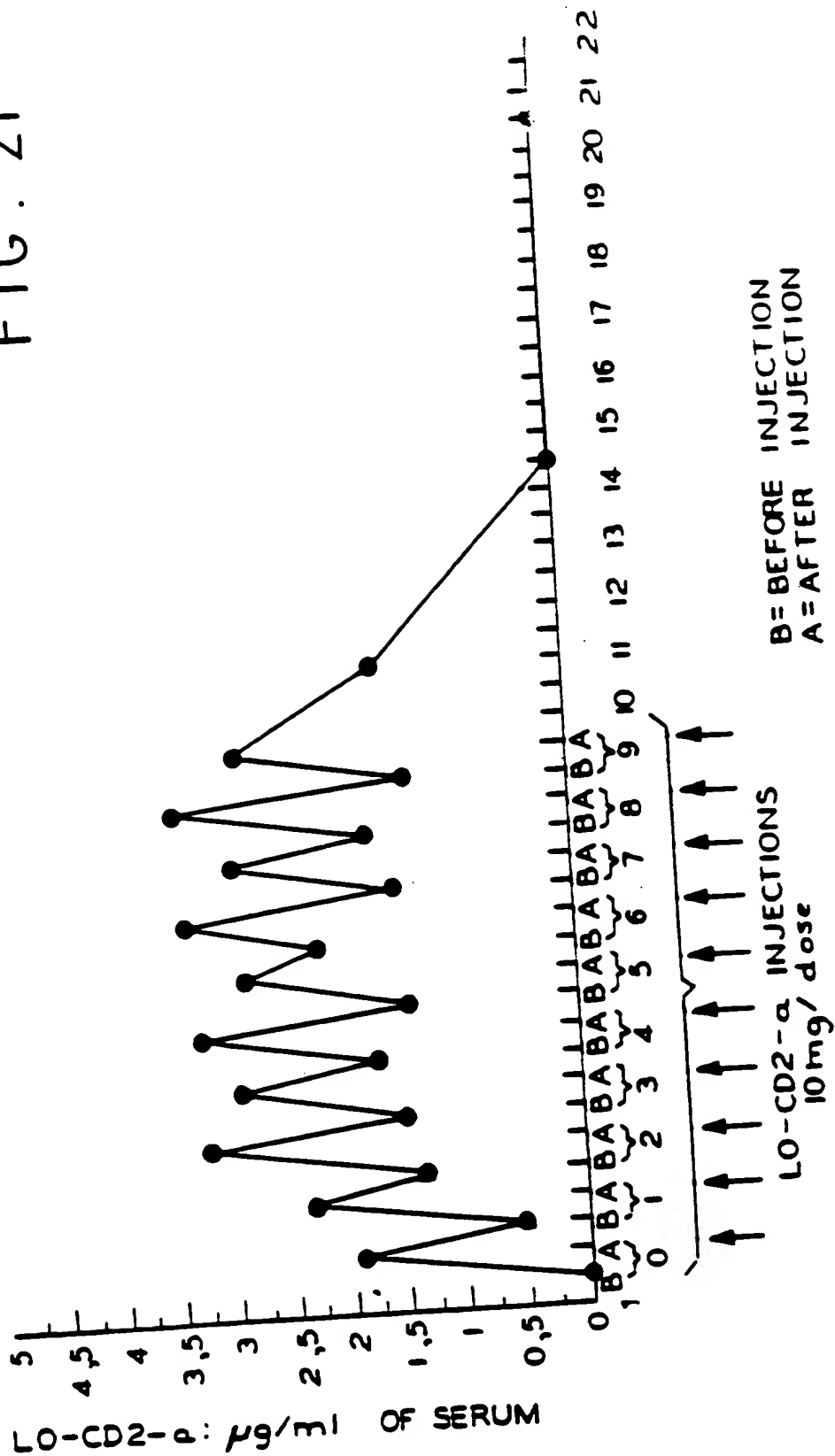
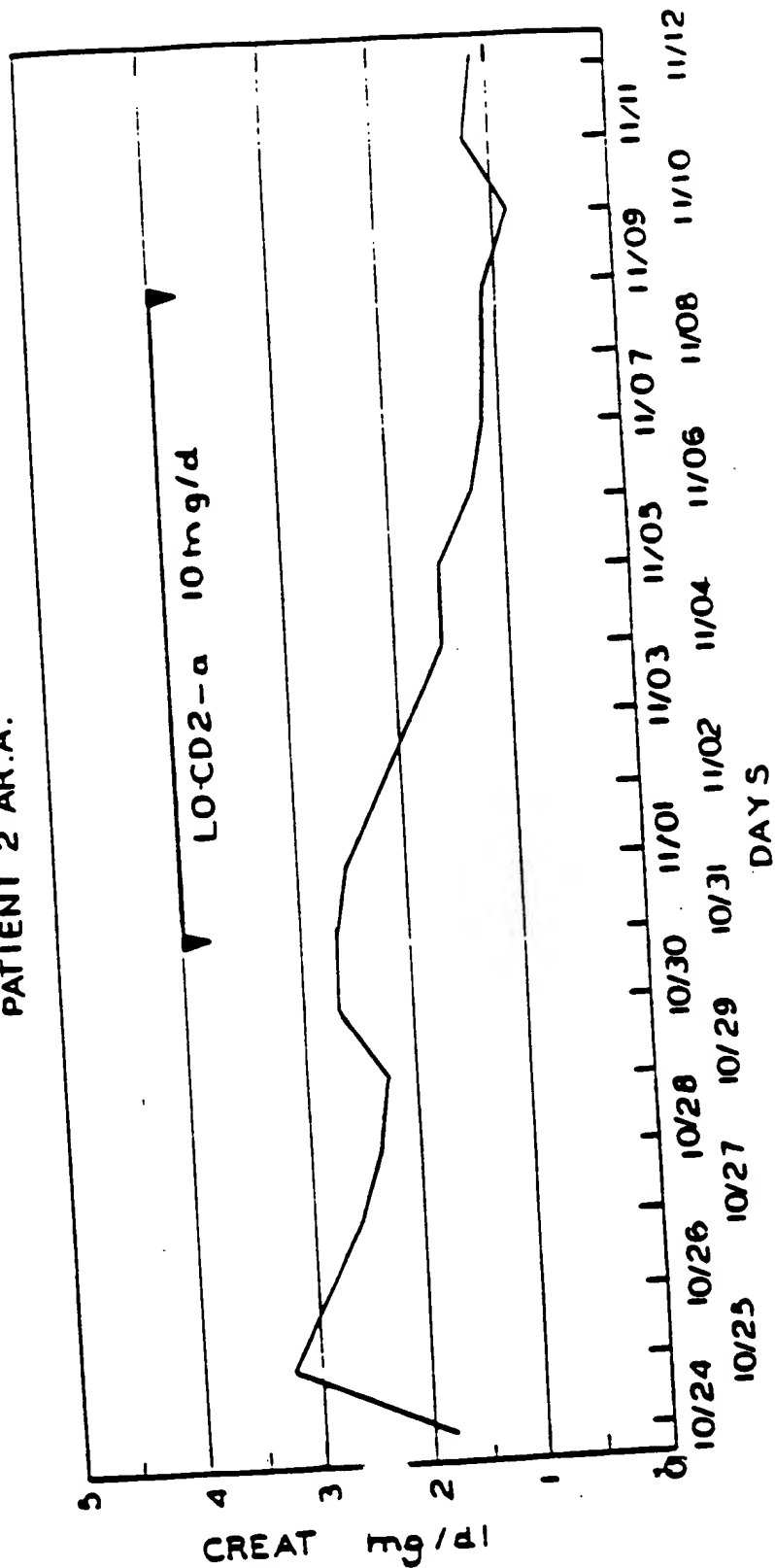


FIG. 22

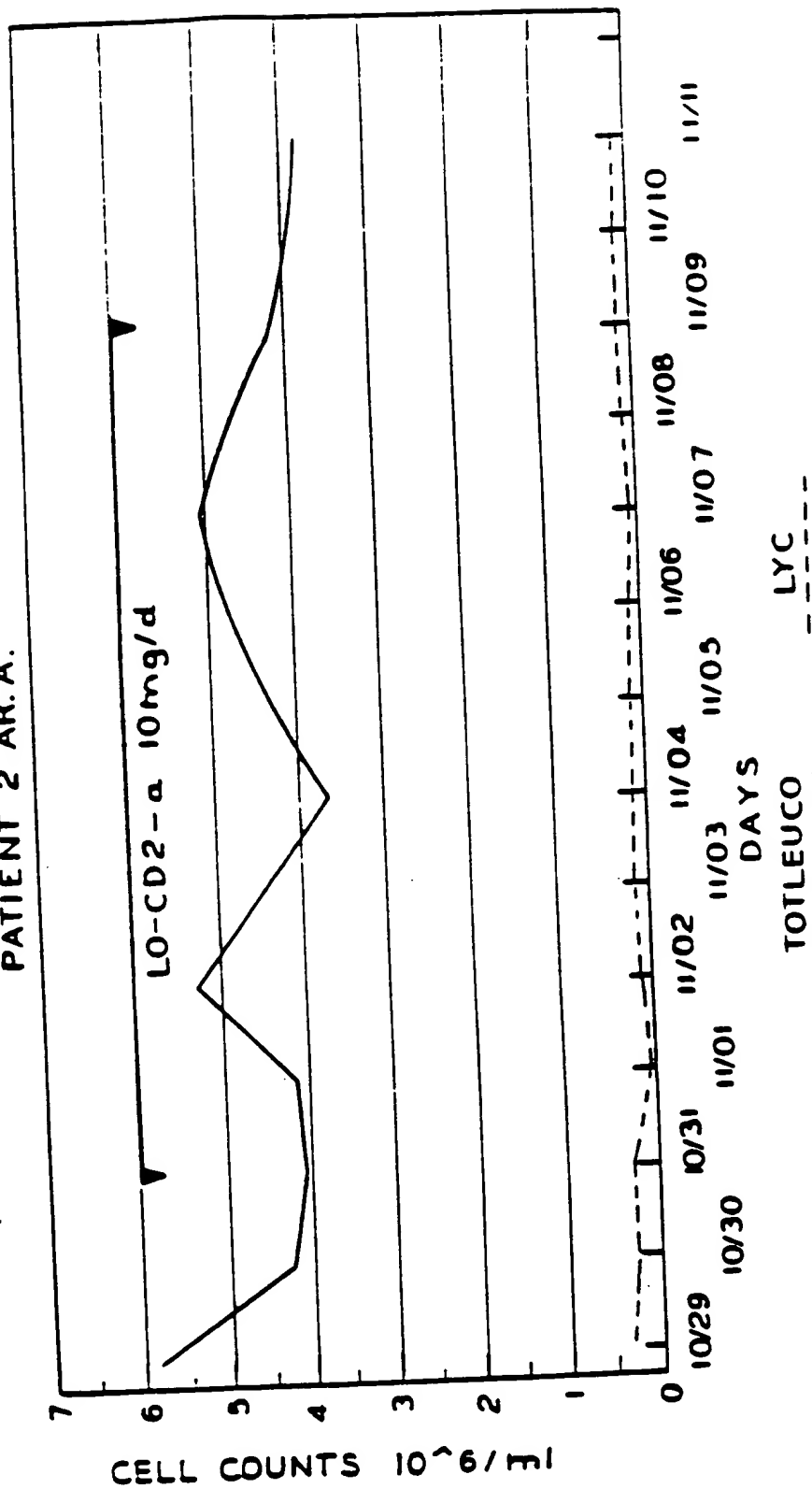
CREATININ VALUES
PATIENT 2 AR.A.



CREAT

FIG. 23

LEUCOCYTE COUNTS
PATIENT 2 AR.A.



LO-CD2- α IN KIDNEY ALLOGRAFT REJECTION
PATIENT 2 (A. A.)

FIG. 24

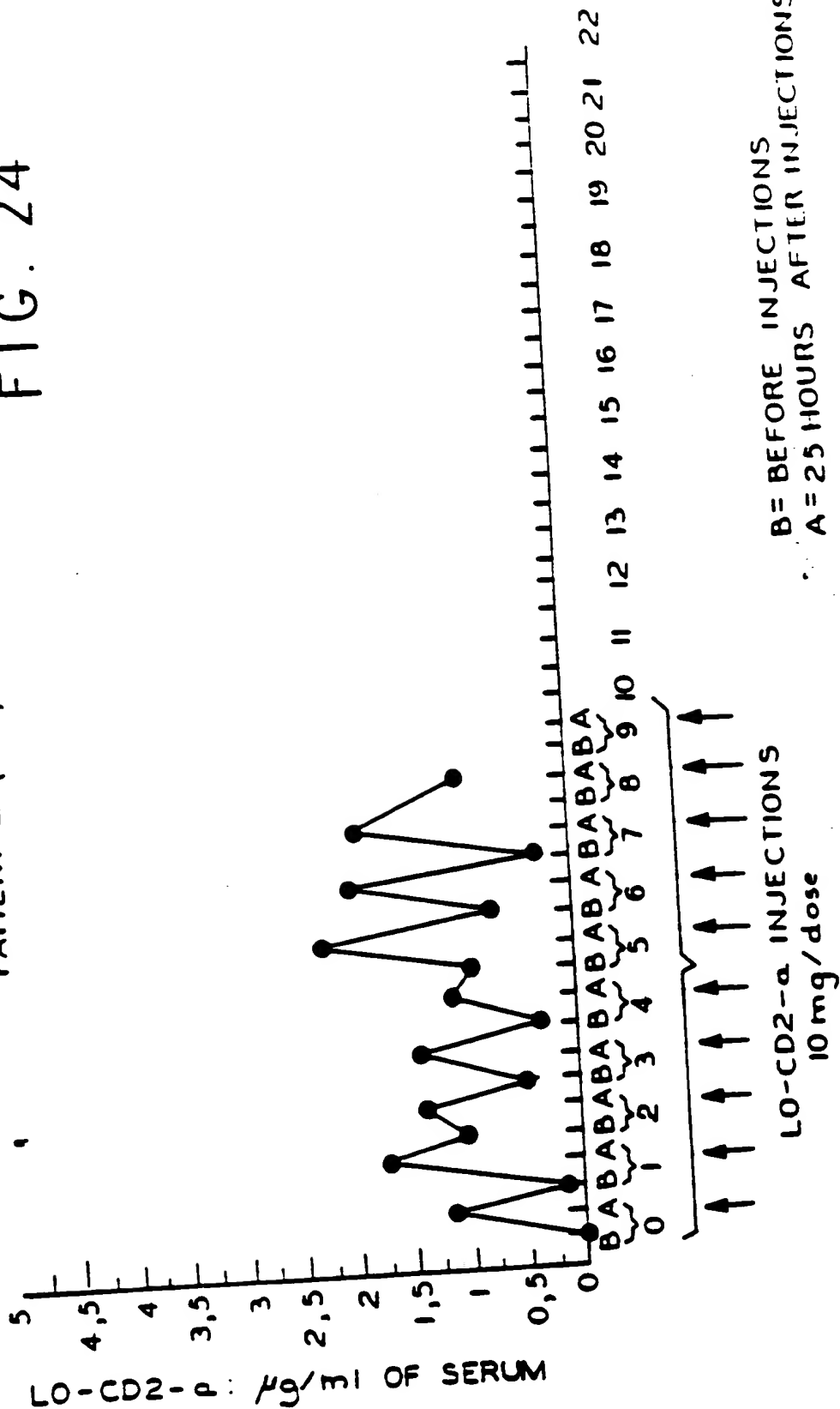
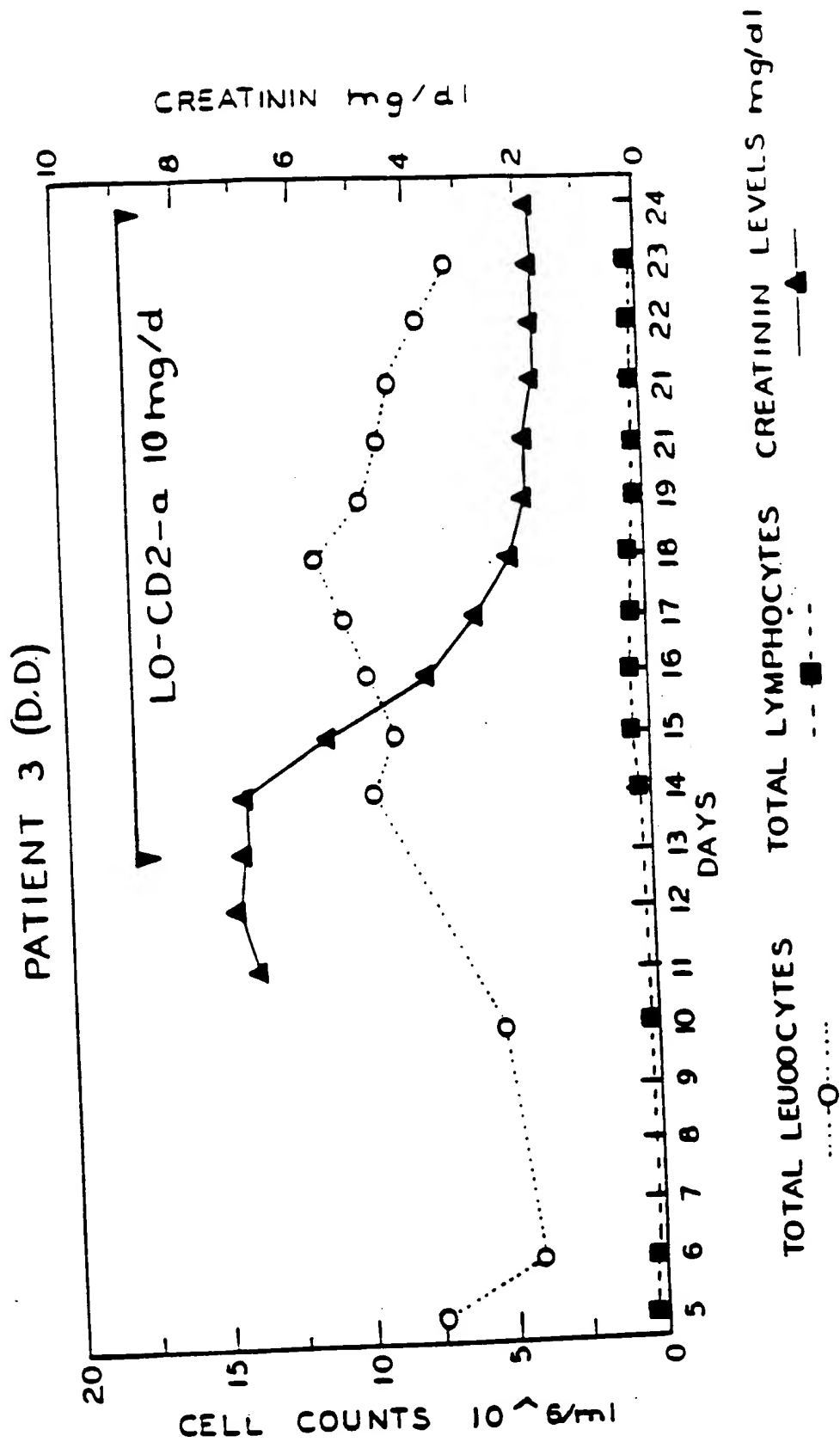
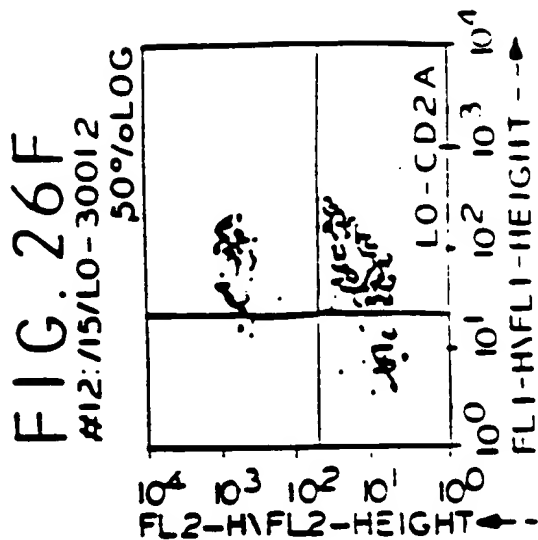
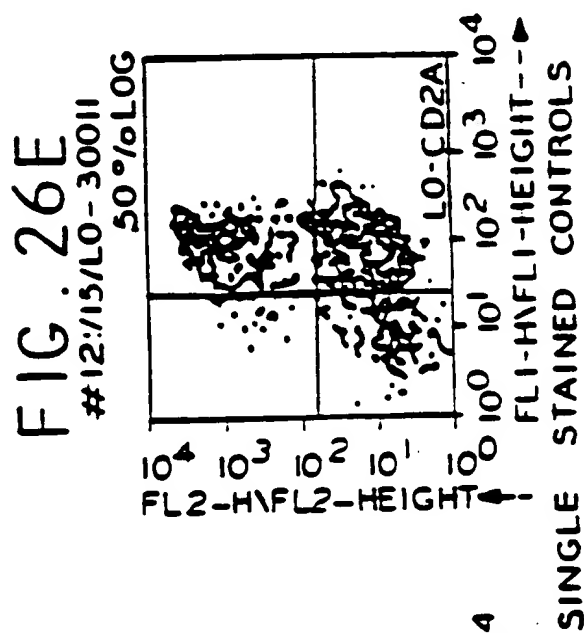
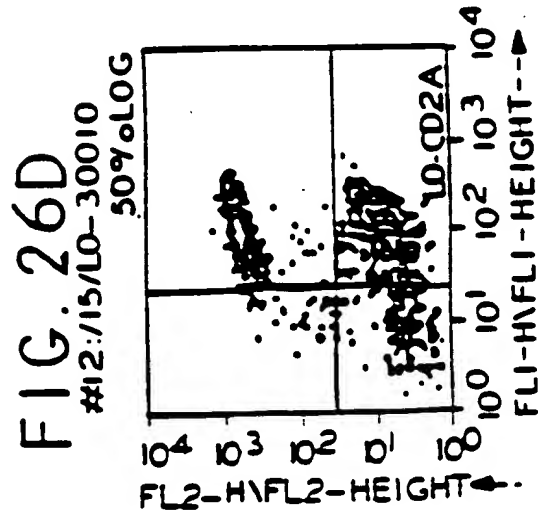
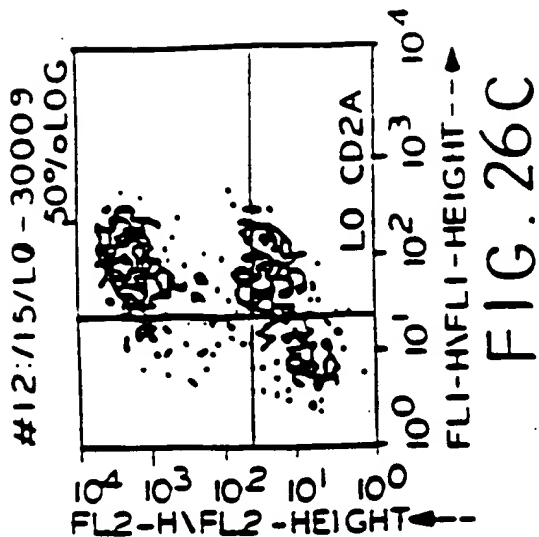
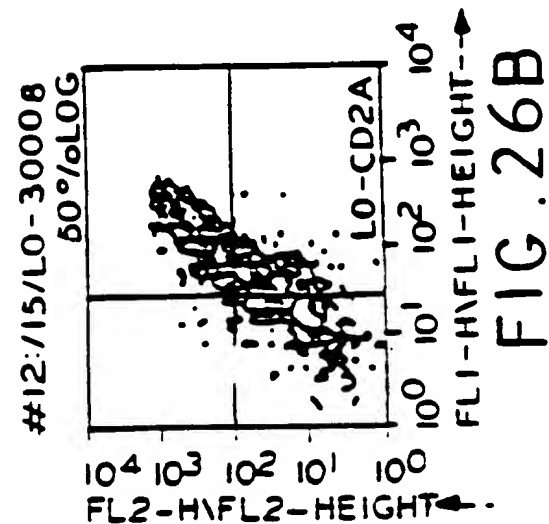
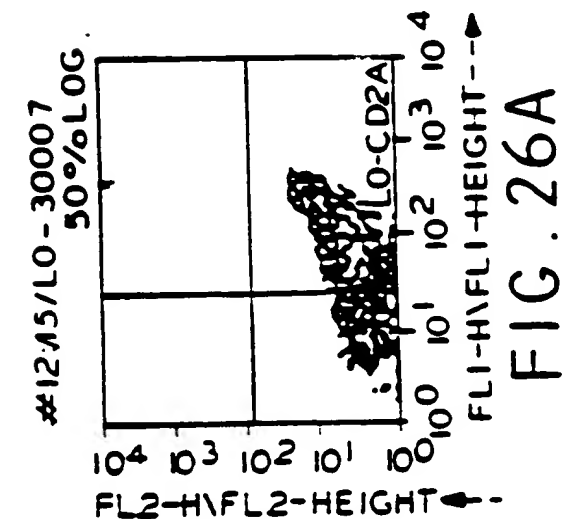


FIG. 25





SINGLE STAINED CONTROLS

SINGLE STAINED CONTROLS

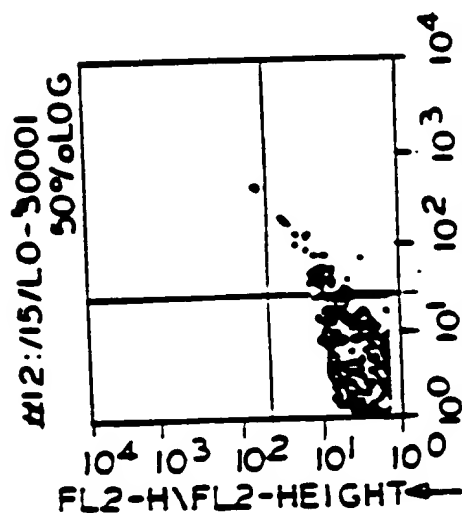


FIG. 26G

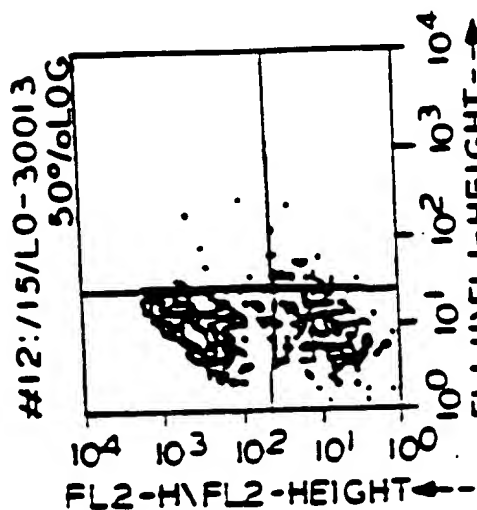


FIG. 26H

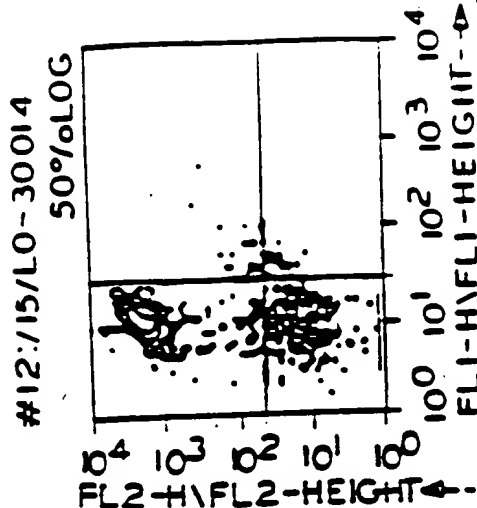


FIG. 26I

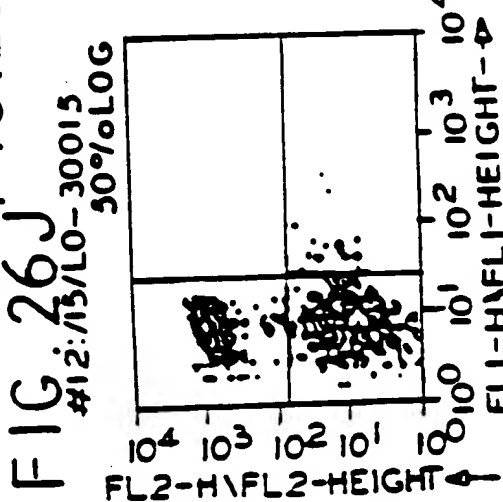


FIG. 26J

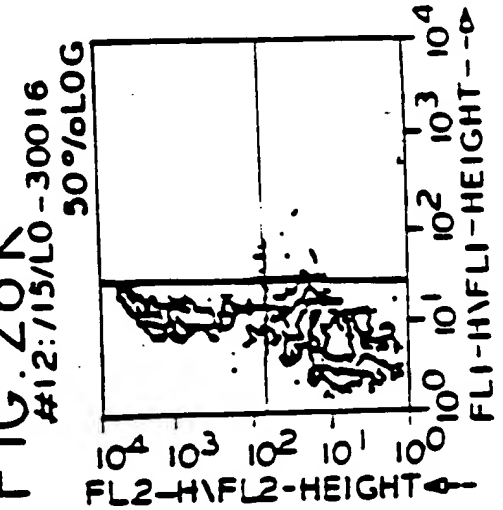


FIG. 26K

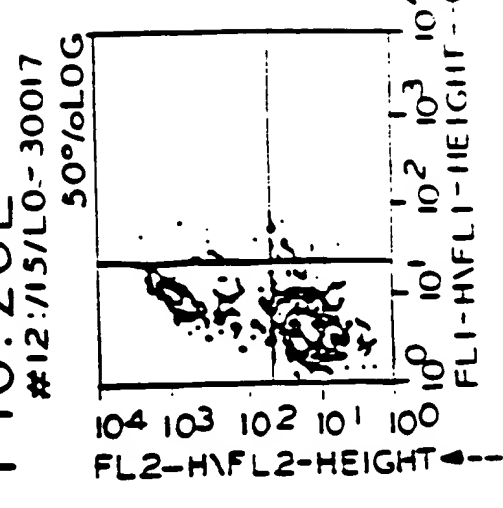


FIG. 26L

FIG. 27A

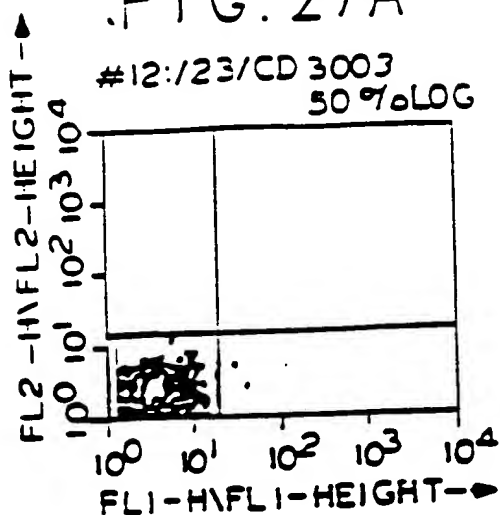


FIG. 27B

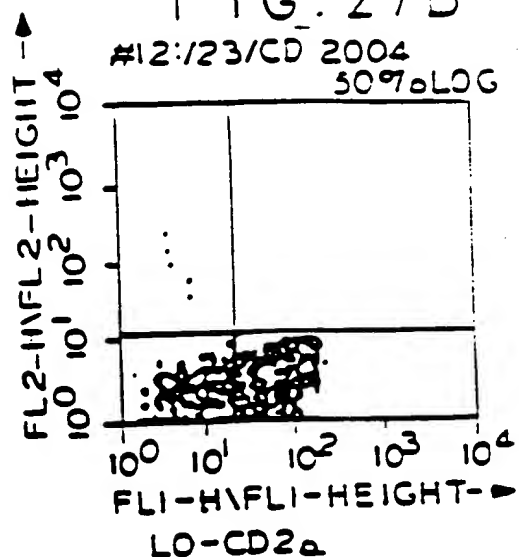


FIG. 27C

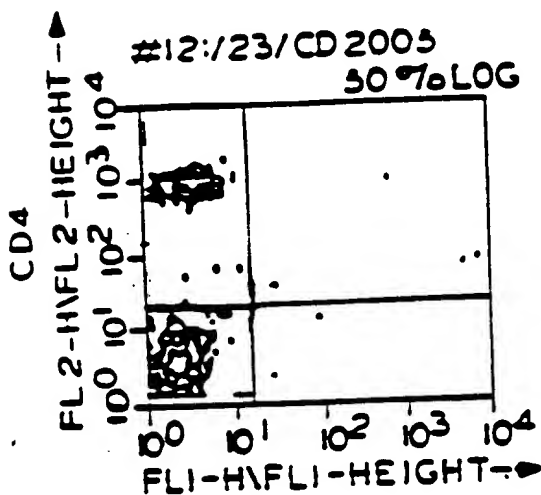


FIG. 27D

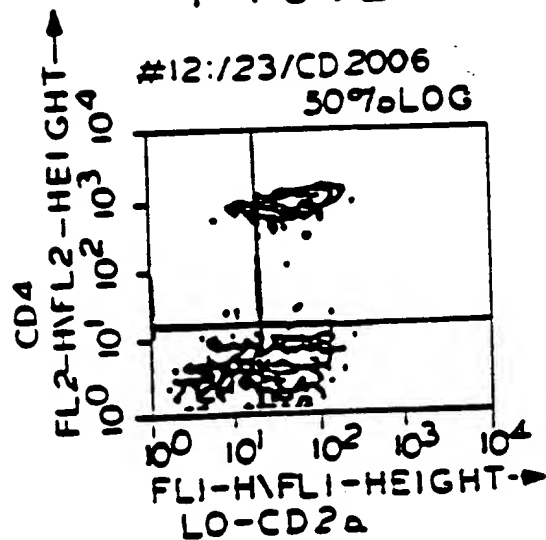


FIG. 27E

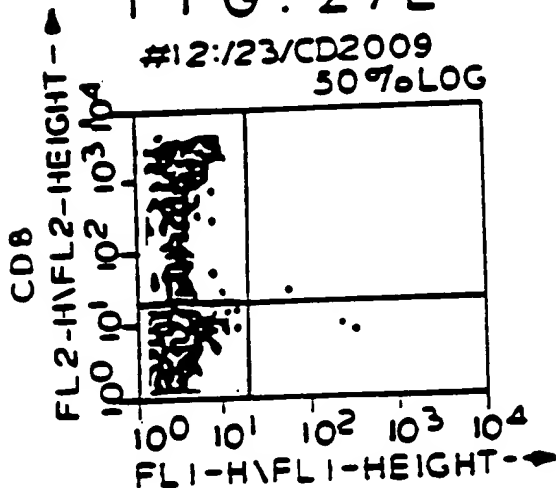


FIG. 27F

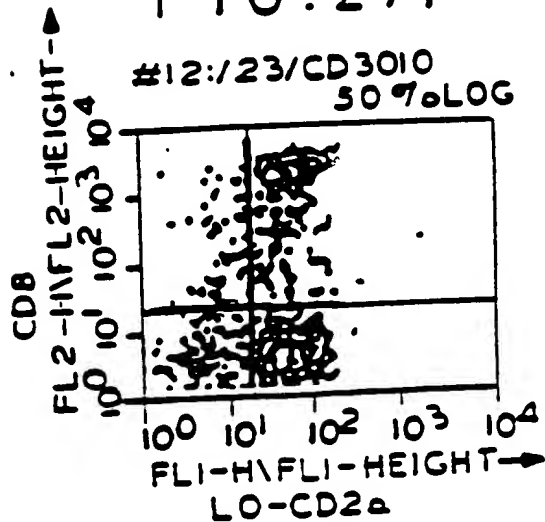


FIG. 27G ^{32/41}

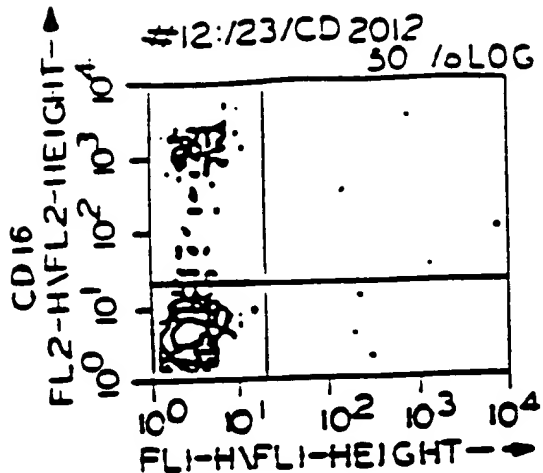


FIG. 27H

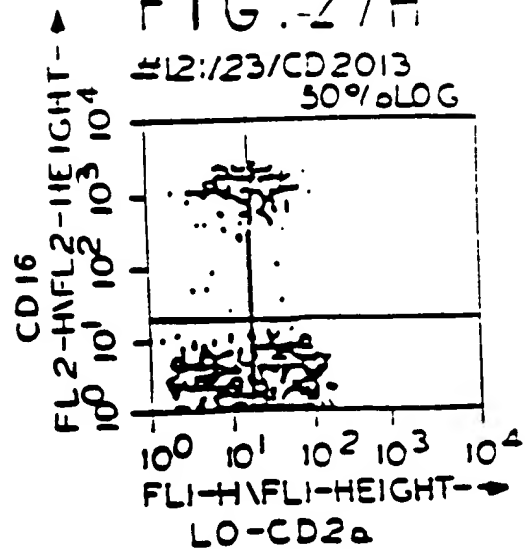


FIG. 27I

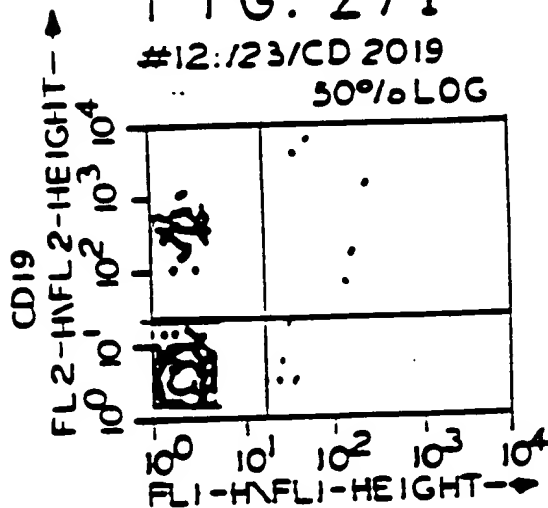


FIG. 27J

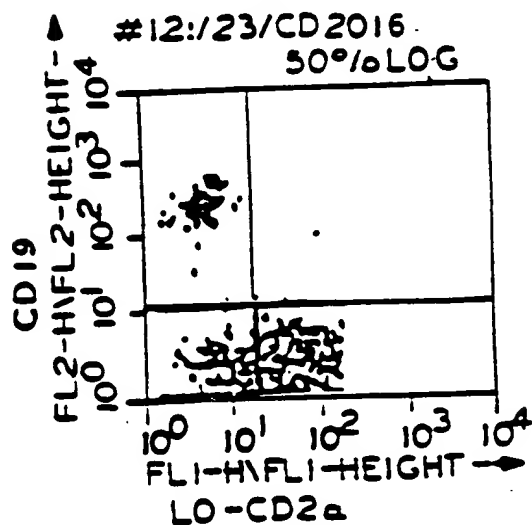


FIG. 27K

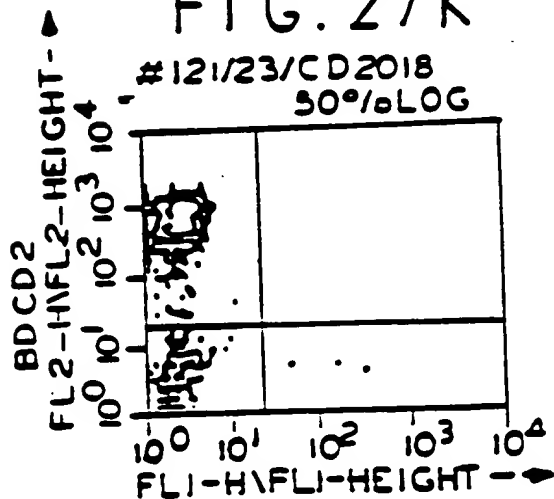
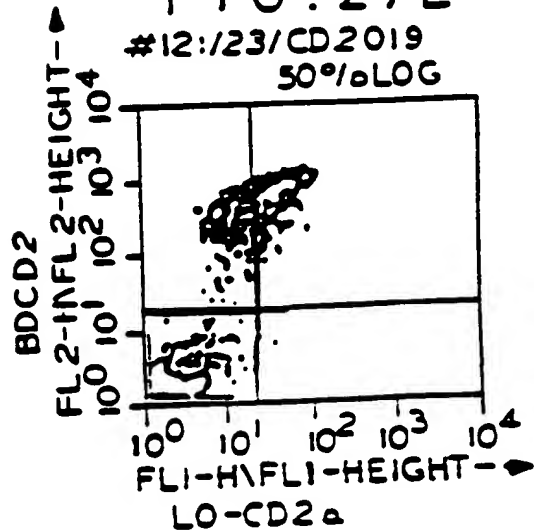


FIG. 27L



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FIG. 28A

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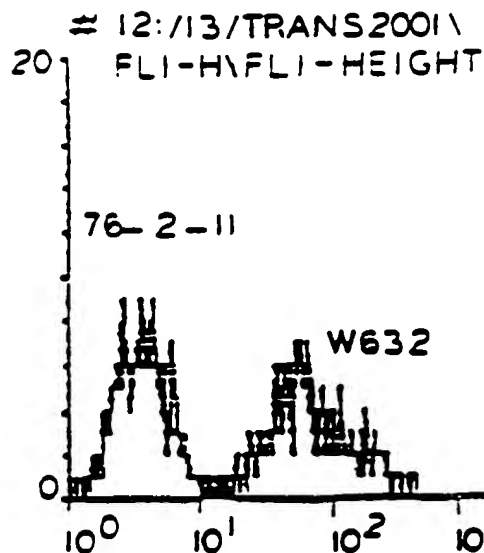


FIG. 28B

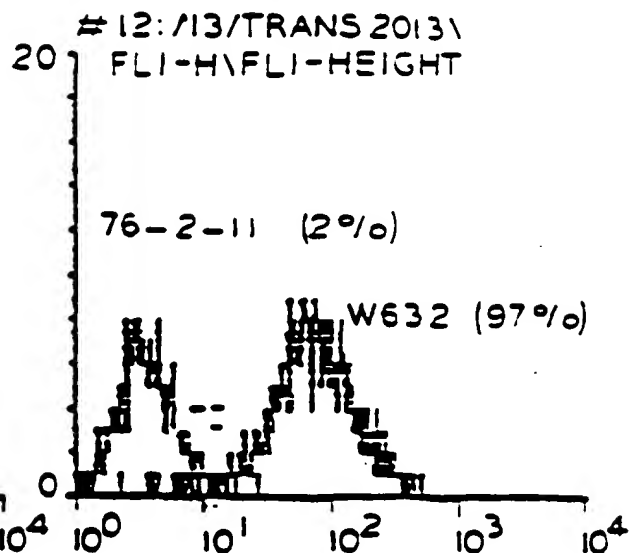


FIG. 28C

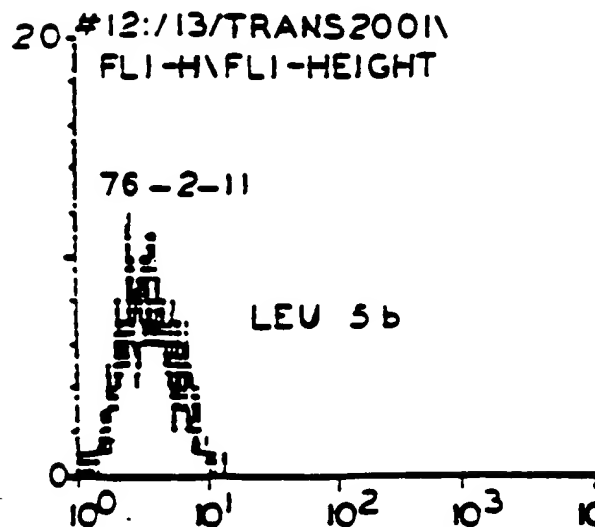


FIG. 28D

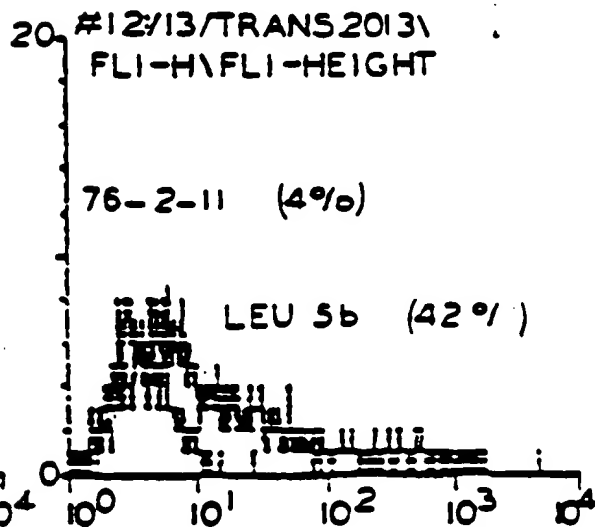


FIG. 28E

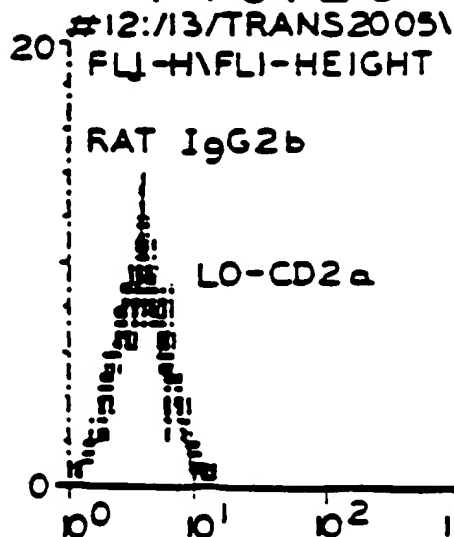
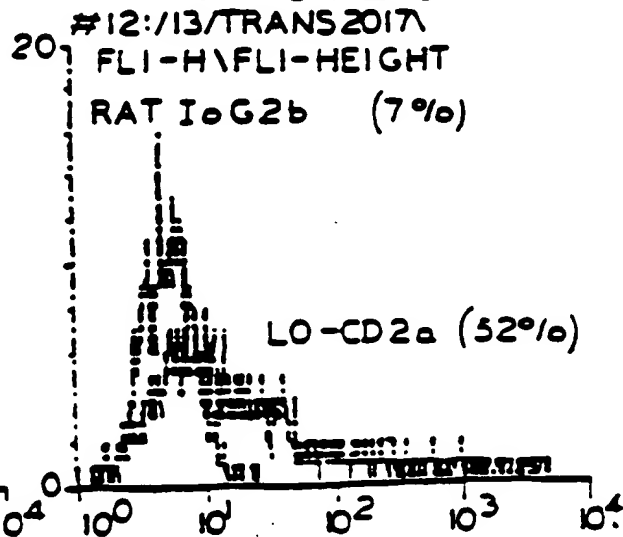


FIG. 28F



Page: 1 to 761

10 20 30 40 50 60 70 80 90 100
* * * * *
ATGATGAGCTCTGTCAGTCCCTGTTTCTGTTATGCTTGGATTCTGCGTAAGTAGAAGATGAGTTACAGACAGAATGGGATGAGATGAGTTCT
M M S P V Q S L F L L L W I L G>
-20
110 120 130 140 150 160 170 180 190 200
* * * * *
GACTGCCATGTTGGCTGTCATGTGTGTAAGCAGGCTCCTATTTTCTAAGATGAGACACTTGAGATTCATTACTGATATAGAAATTACAGATGAG
210 220 230 240 250 260 270 280 290 300
* * * * *
ATAGATTGTGCTAAGAGATTCTAATGTAGATGAGAAGGTGATGCCATTAGATCTGCAACCGAATGTTTGTGAAAAAGCATTGGTATATTTT
310 320 330 340 350 360 370 380 390 400
* * * * *
TTAAAAATCACAAACACACCGGATCTCAGAGAAATGAGTAACAAAAAGTAATTCACAAAGATTGGTTCAAATTTTGCACATACTTTGTTCTGATC
410 420 430 440 450 460 470 480 490 500
* * * * *
TATTATTAATTCAGAACCAATGATGTGTGCTGACCCAGACTCCACTTACTTTATTGGCTTACATTGCAATCAGTCTTCATCTCTTGCAGCTCA
T N G D V V L T Q T P P T L L A T I G Q S V S I S C R S>
510 520 530 540 550 560 570 580 590 600
* * * * *
AGTCAGAGTCTCTTACATAGTAGTGAACACCTATTTAATTTGTTGCTACAGAGACAGGCCAATCTCCACGCGCTAATTTATTTTGTATCCAAAC
S Q S L L H S S G N T Y L N W L L Q R T G Q S P Q P L I Y L V S K>
3c 40
610 620 630 640 650 660 670 680 690 700
* * * * *
TGAATCTGGGTCGCCAACAGGTTACGTGCGCAGTGGGTACAGAACAGATTTCACACTCAAAATCAGTGAAGTGAAGCTGAGATTTGGGGCTTATTA
L E S G V P N R F S G S G S G T D F T L K I S G V E A E D L G V Y Y>
10 70
710 720 730 740 750 760
* * * * *
CTGCATGCAATTTACCATTTATCCGATACACGTTTGAGCTGGAGCAAGCTGGAACCTGAAA
C M Q F T H Y P Y T F G A G T K L E L K>
100

Fig. 29

000667-040798

[illegible]

110 120 130 140 150 160 170 180 190 200
 * * * * * * * * * *
 CACTATCTTGATTCTTTCACAGGGCTCACTCAGAGTCCAGCTGCAGCAATCTGGCCTGAGCTTCAGAGACCCGGGGCTCAGTCAAGTTGCG
 V N S E V Q L Q Q S G P E L Q R P G A S V K L S>
 10

| | | | | | | | | | | | | | | | | | | | |
|--|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|
| | 210 | * | 220 | * | 230 | * | 240 | * | 250 | * | 260 | * | 270 | * | 280 | * | 290 | * | 300 |
| TGCAGGCTTCTGGCTATATAATTACAGAATACTATACTGTACTGGTGACAGAGCCCTAACACAGGGCCTGAATTAGTAGGAAGATCGATTCCTGAAAG | | | | | | | | | | | | | | | | | | | |
| C K A S G Y I F T E Y Y M Y W V K Q R P K Q G L E L V G R I D P E> | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . | . |
| | 30 | | | | | | | | | | 40 | | | | | | 50 | | |

* 310 * 320 * 330 * 340 * 350 * 360 * 370 * 380 * 390 * 400
 * * * * *
 A C G T A G T A T G A T T A T G T T G A G A G T T C A A A A G A G G C C A C A C T A G T C A G A T A C T G T C C A C A C A G C C T A C A T G C A A C T C A G C A C C T G A C A T C
 D G S I D Y V E K F K K A T L T A D T S S N T A Y M Q L S S L T S >
 60 70 80

| | | | | | | | | | | | | | | | | | | |
|---|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|---|-----|
| | * | 410 | * | 420 | * | 430 | * | 440 | * | 450 | * | 460 | * | 470 | * | 480 | * | 490 |
| TGAGACACAGCAACTATTTTGTCTAGGGGAATAATCAACTATCGATTGCTTA | | | | | | | | | | | | | | | | | | |
| E D T A T Y F C A R G K F N Y R F A Y W G Q G T L V T V S S > | | | | | | | | | | | | | | | | | | |
| 90 | | | | | | | | /80 | | | | | | //0 | | | | |

Figure 3D

5/17/95

050560Z 040766

Light Chain Variable Region Sequence of rat LO-CD2a,
human HUM5400, and humanized LO-CD2a

| | FR 1 | CDR 1 | FR 2 |
|------------------|--------------------------|-------------------|-----------------------|
| | * * 20 | 30 40 ** * | |
| Rat LO-CD2a Vk | DVVLITQTPPT LLATIGQSVS | ISCRSSQSL | HSSGNTYLNW LLQRTGQSPQ |
| Humanized Vk | ---M---S---S ---V-L--PA- | ----- | -----P----- |
| Human HUM5400 Vk | ---M---S-LS -PV-L--PA- | -----V Y-D---H--- | FQ--P---R |

| | CDR 2 | FR 3 | CDR 3 |
|------------------|-----------------------|----------------|-----------------------|
| | * 60 70 | 80 * 90 100 | |
| Rat LO-CD2a Vk | PLIYLVSKLE SGVPNRFSQS | GSGTDFTLKI | SGVEAEDLGV YYCMQPTHYP |
| Humanized Vk | -----D----- | -----V----- | ----- |
| Human HUM5400 Vk | R---K--NRD ---D----- | -----R-----V-- | -----G--W- |

| | FR 4 |
|------------------|---------------|
| | 110 |
| Rat LO-CD2a Vk | YTFGAGTKLE LK |
| Humanized Vk | ---Q-----I- |
| Human HUM5400 Vk | ---Q-----I- |

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867040"22095060

Humanized LO-CD2a Light Chain V Region

Sequence Range: 1 to 807

AAGCTTCATGATGAGTCCGTGTCACGTCGCCCGTTCTCGTTAATTGGATTCTCGGTAAGTAGAGAATGAGTTACAGGCACAAGAATGGGGATGGAGGAT

110 * * * * * 120 * * * * * 130 * * * * * 140 * * * * * 150 * * * * * 160 * * * * * 170 * * * * * 180 * * * * * 190 * * * * * 200 * * * * *
 GAGTTCGACTGCCCATGTGGCTGTCCATGTGTGGTAAGGCAGGTCCTATTTTCTAAGATGGACACTTGAGATTCCATTACTTGATAATGAGAAATTAC

* * * * *
 210 220 230 240 250 260 270 280 290 300
 AGATGAGATAGGATTTGTGCTAAGAGGATTCTAATGTAGATGAGAAGGTGATGCCATTAGGATCTGCAACCGAATTGTTTGTGAAAAAGCATTTCGT

* 310 320 330 340 350 360 370 380 390 400
 ATATTTTTTAAAAATCACAAAACACACCGGGATCTCACAGGAAATGAGTAACAAAAAGTAATTCACAAAGATTGGTTGCACAAATTTTGCACATAACTTTGT

* 410 * 420 * 430 * 440 * 450 * 460 * 470 * 480 * 490 * 500 *
 TCTGATCTATTATAATTTTCAGGAACCAATGGTGTGATGTCACCCAGAGTCCACCTTCATTTATTTGGTAACCTTGGGACAACAGCTTCCATCTCTTG

[illegible]

* 610 * 620 * 630 * 640 * 650 * 660 * 670 * 680 * 690 * 700 *
 TCCAAACTGGAATCTGGGGTCCCCGACAGGTTTCAGTGGCTCAGGAGTGGAAACAGATTTTCACACTCAAAATCAGTGGAGCTGGAAGCTGAGGATCTGGGGG
 S K L E S G V P D R F S G S G S G T D F T L K I S G V E A E D V G>

[illegible]

★
TGGATCC

Fig 32

5/6/15

Heavy Chain Variable Region Sequences of rat LO-CD2a, human Amu 5-3, and humanized LO-CD2a

| | | | | | | |
|------------------|------------|-----------|------------|------------|-------------|------|
| | | FR 1 | | CDR 1 | FR 2 | |
| | | 10 | 20 | 30 | 40 | * 50 |
| Rat LO-CD2a Vh | EVQLQQSGPE | LQRPASVKL | SCKASGYIFT | EYYHWYKQR | PKQGLELVGR | |
| Humanized Vh | Q---V---A- | VKK-----V | -----T-- | -----A- | -G-----M-- | |
| Human Amu 5-3 Vh | Q---V---A- | VKK-----V | -----T-- | G---H--R-A | -G-----WM-- | |

| | | | | |
|------------------|------------|------------|------------|------------|
| | CDR 2 | | FR 3 | |
| | 60 | * * * * | 80 | * * 90 |
| Rat LO-CD2a Vh | IDPEDGSIDY | VEKFKKKATL | TADTSSNTAY | MQLSSLTSED |
| Humanized Vh | ----- | -----V-- | -----S-- | -E-----D- |
| Human Amu 5-3 Vh | -N-NS-GTN- | AQ--QGRV-M | -R---IS--- | -E--R-R-D- |

| | | |
|------------------|-----------------|----------|
| | CDR 3 | FR 4 |
| | 110 | |
| Rat LO-CD2a Vh | FNYR/////FAYWGQ | GTLVTVSS |
| Humanized Vh | ----- | ----- |
| Human Amu 5-3 Vh | TE-IVVAEG-D---- | ----- |

Fig. 33

964040-27095060

Humanized LO-CD2a Heavy chain V region

Sequence Range: 1 to 701

AAGCTTCATGAATGCAGGTGGATCATCCTCTTCTTGATGGCAGTAGCTACAGGTAAGGCACCTCCCAAGTCCTAAACTTTAGAGATCATACACTTGGGAG
M K C R W . I I L F L M A V A T G>

* 110 * 120 * 130 * 140 * 150 * 160 * 170 * 180 * 190 * 200
 ACAGTGACACTATCTTTGGATTCTTTTCAACAGGGGTCAACTCACAGGTGCAGCTGGTGCAGTCTGGGGCTGAGGTGAAGAAGCCTGGGGCCTCAGTGAA
 V N S O V O I V O S G A E V K K P G A S V K

GGTCTCCTCGCAAGGCCTTCTGGATACACCTTCACCGAGTACTATATGTACTGGGTGCGACAGGCCCTGGACAAAGGCTTGAGCTGATGGGAAGGATCGAT

* 310 320 330 340 350 360 370 380 390 400
 CCTGAAGACGGTAGTATTGATTGTTGAGAAGTTTAAGAAAAAGGTACCCCTGACCGCTGACACGTCCTCTAGCACAGCCTACATGGAGCTGAGCAGCC

* * * * *
 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500
 TGACCTCTGACGACACGGCCGCTGATTACTGTGCGAGAGGAAAGTTTAACATACTAGGTTTGTCTTACTGGGGCCAAAGAACCCCTGGTACCGCTCTCTCCTCAGG

* 510 520 530 540 550 560 570 580 590 600
 TGAGTCCTTACAACCTCTCTCTCTATTTCAGCTTAAATAGATTTTACTGCATTTGTTGGGGGGAAATGTTGTATCTCGAATTTTCAGGTCAATGAAGGACT

AGGGA CAC C C T T G G G A G T C A G A A A G G G T C A T T T G G G A G C C C G G G T G A T G C A G A C A G A C A T C C T C A G C T C C G G A C T T C A T G G C C A G A G A T T T A T A G G G A T C

U

Fig. 34

56/11/15

Binding of LO-CD2a and LO-CD2a Hu to Jurkat Cells

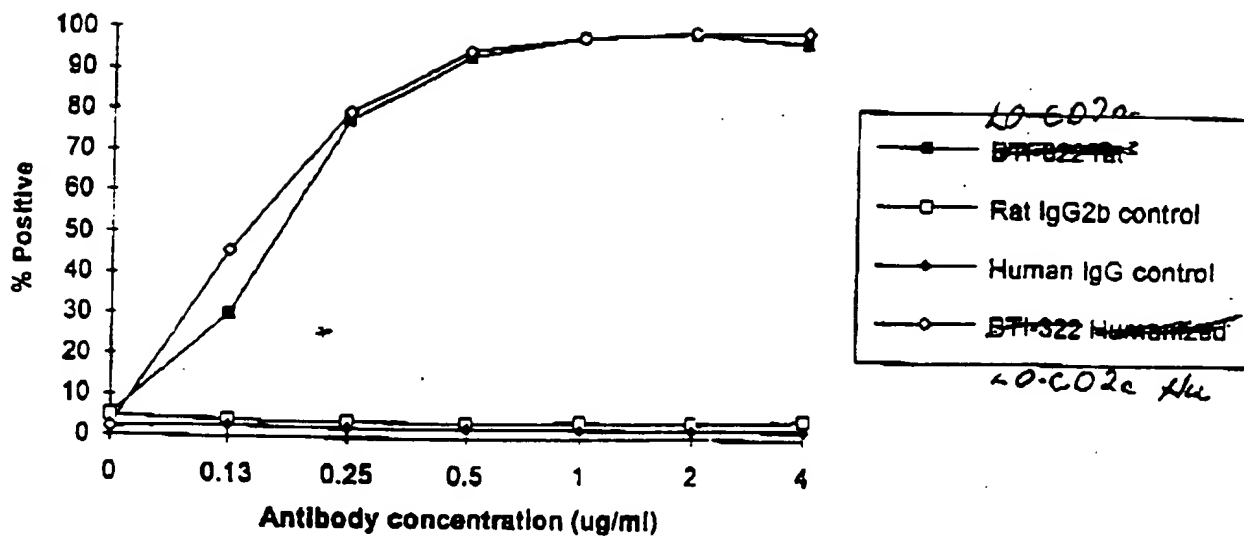


Fig. 35

Induction of Hyporesponsiveness *in vitro*

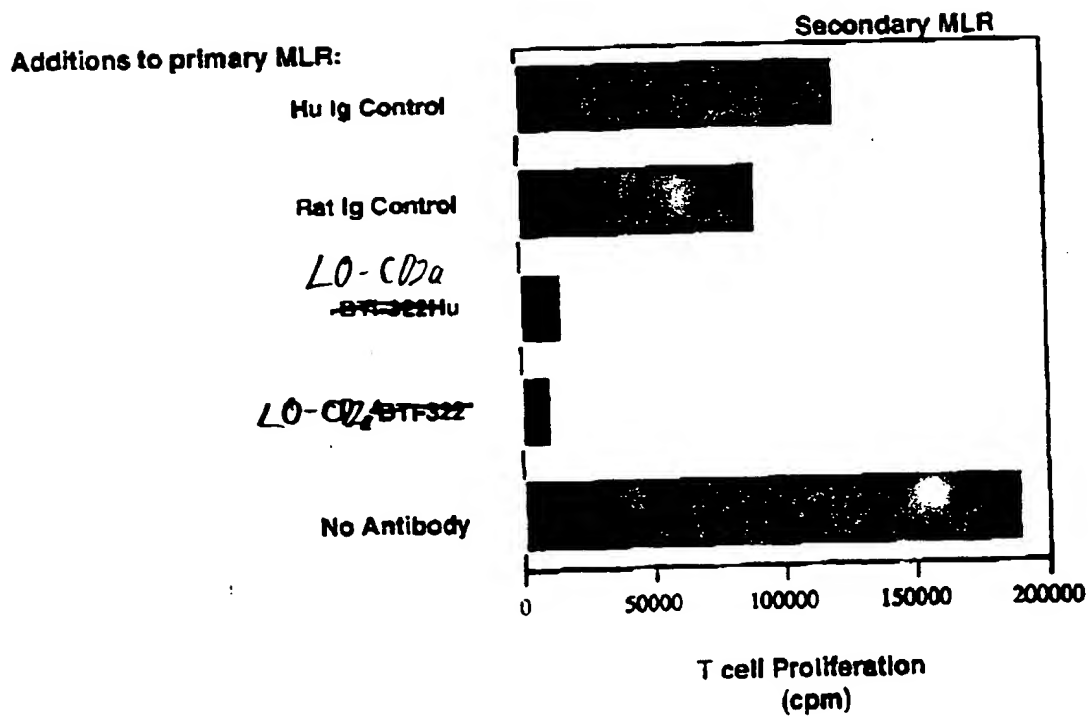


Fig. 3.6

09056072-040798

09056072-040798

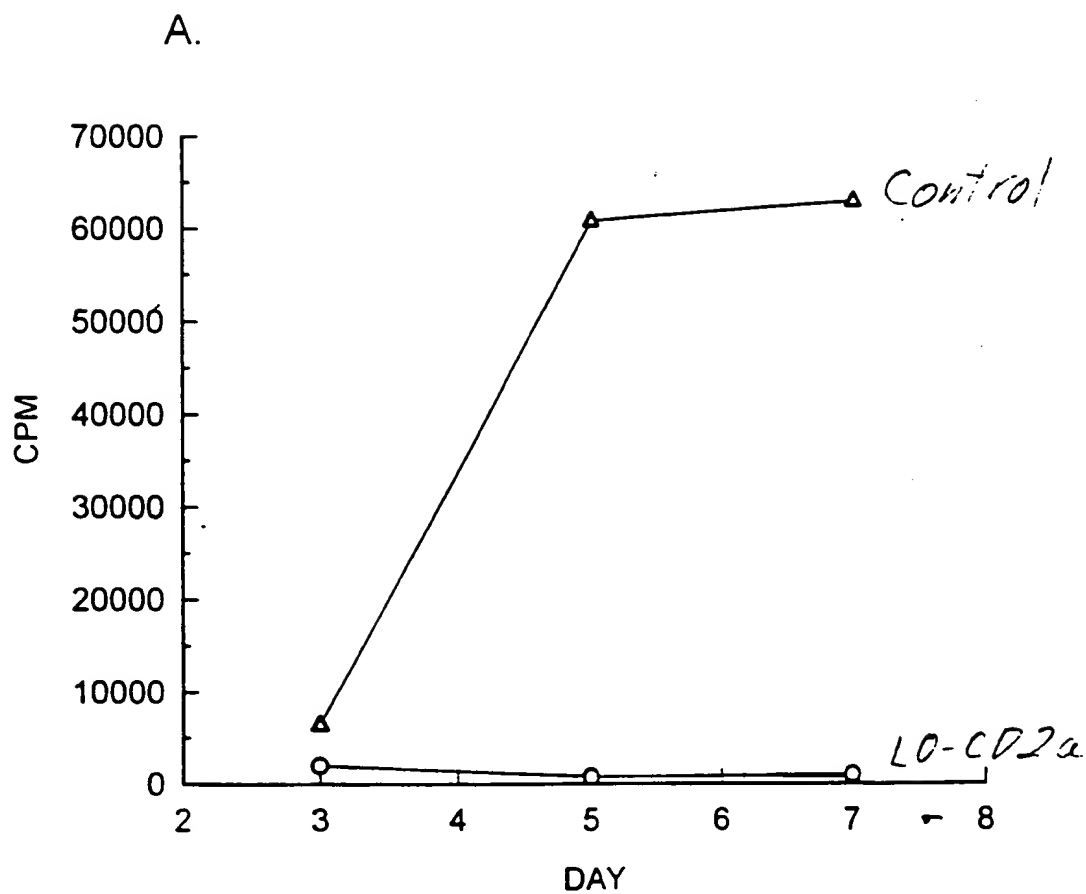
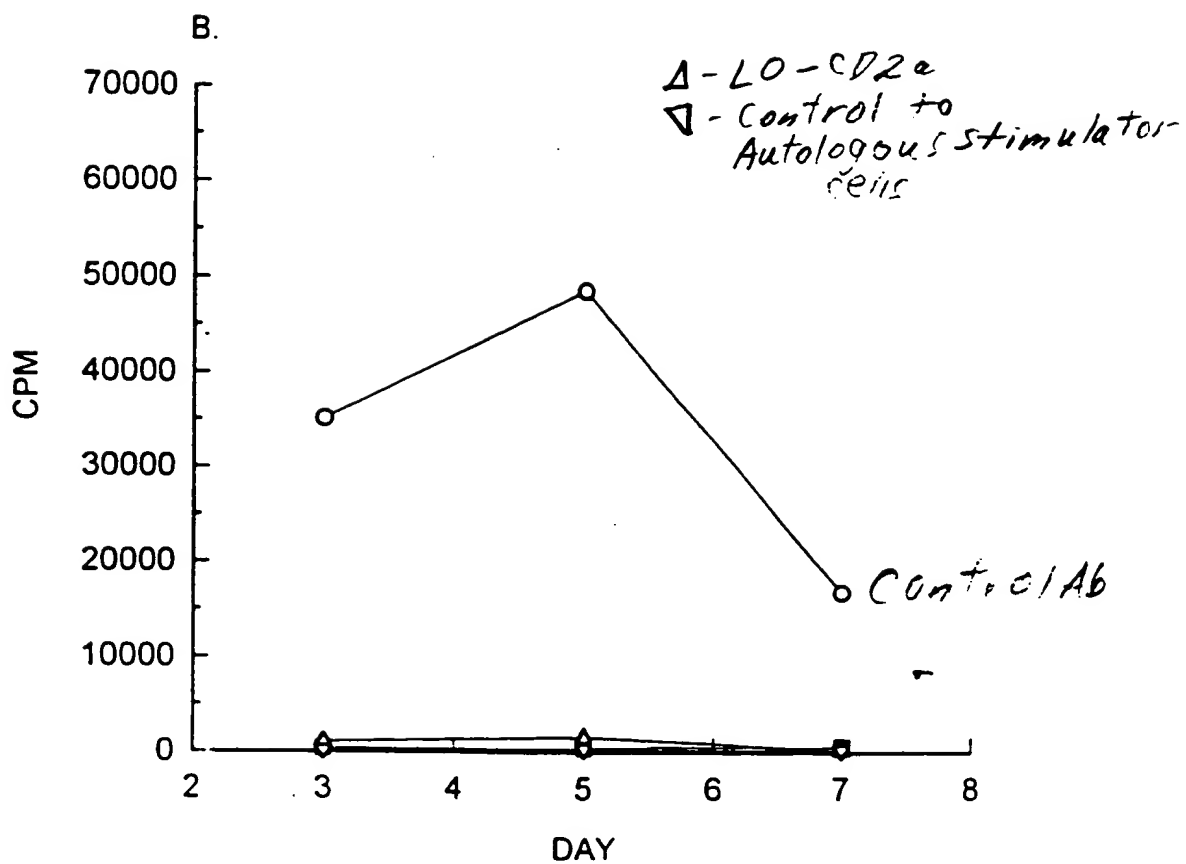


Fig. 37A

09056072 24095060



110 578

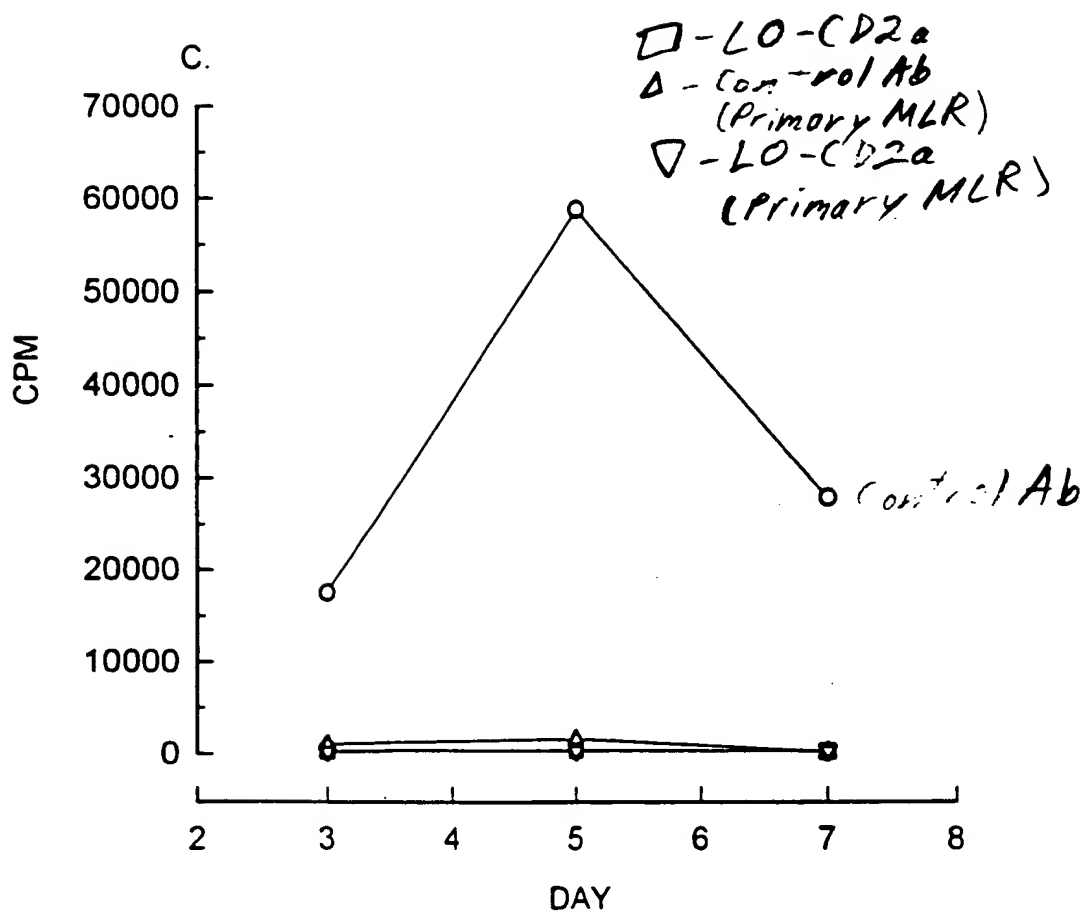


Fig. 37C

862040" 22095060

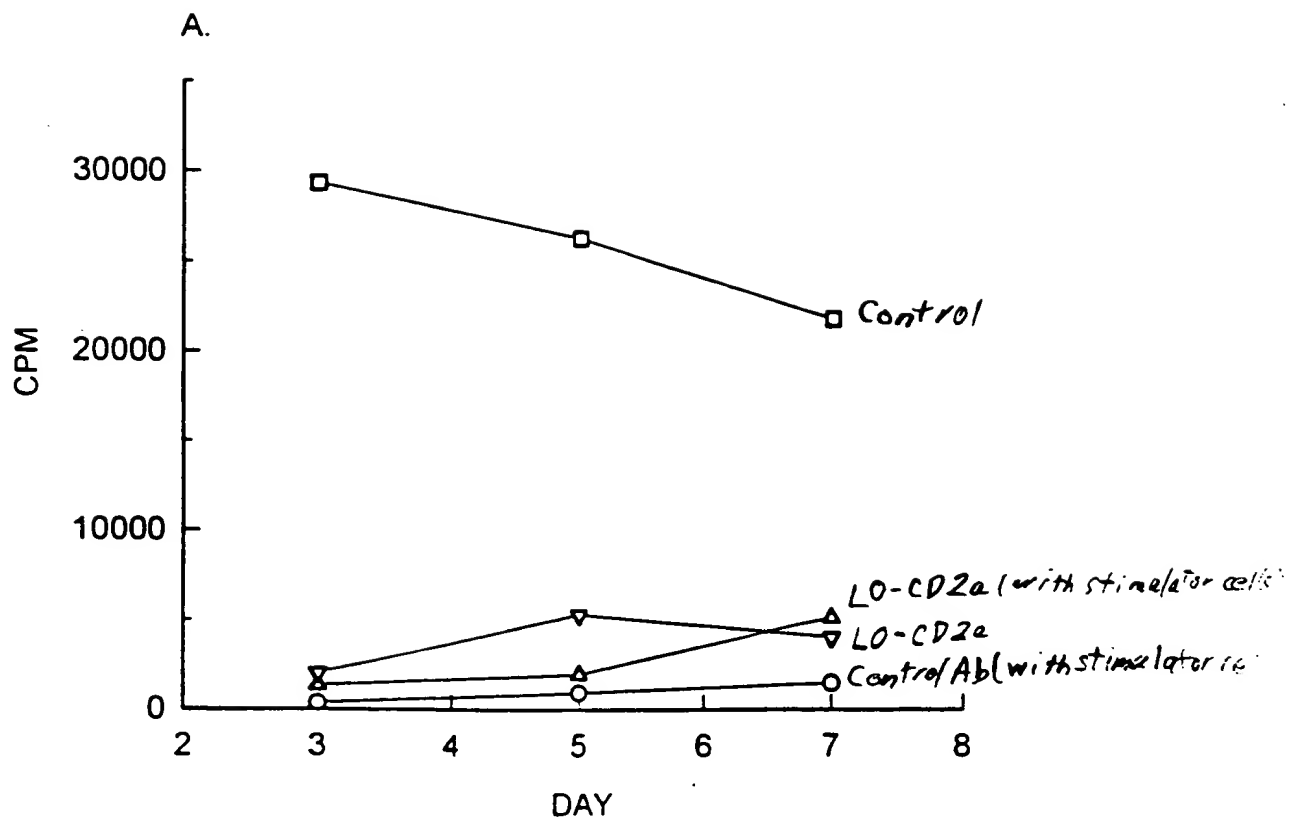


Fig. 3A

862040-24095060

2

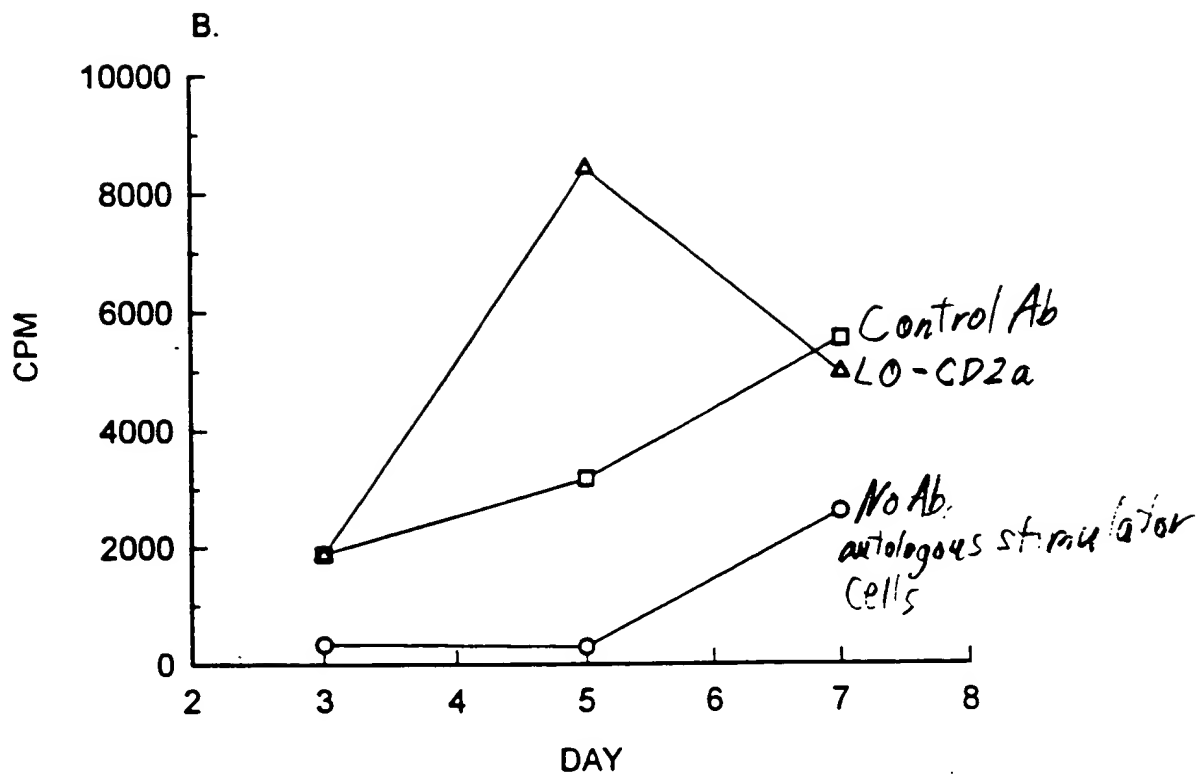


Fig. 3PB

862040" 22095060

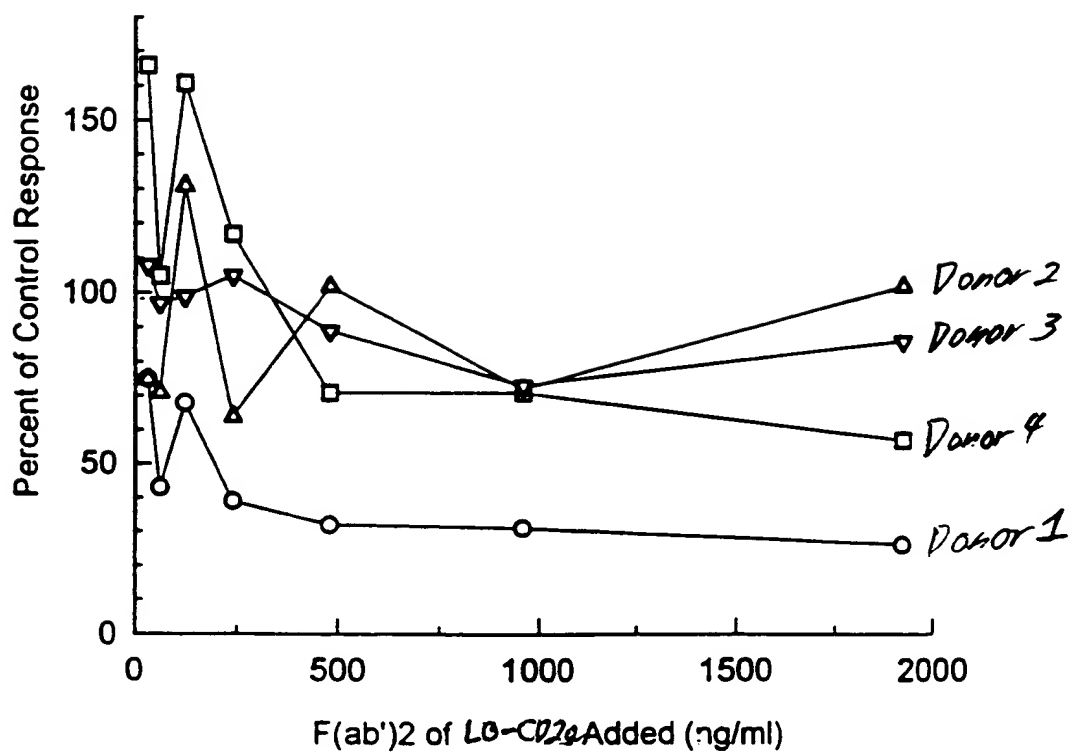


Fig. 39

362040" 2/095060

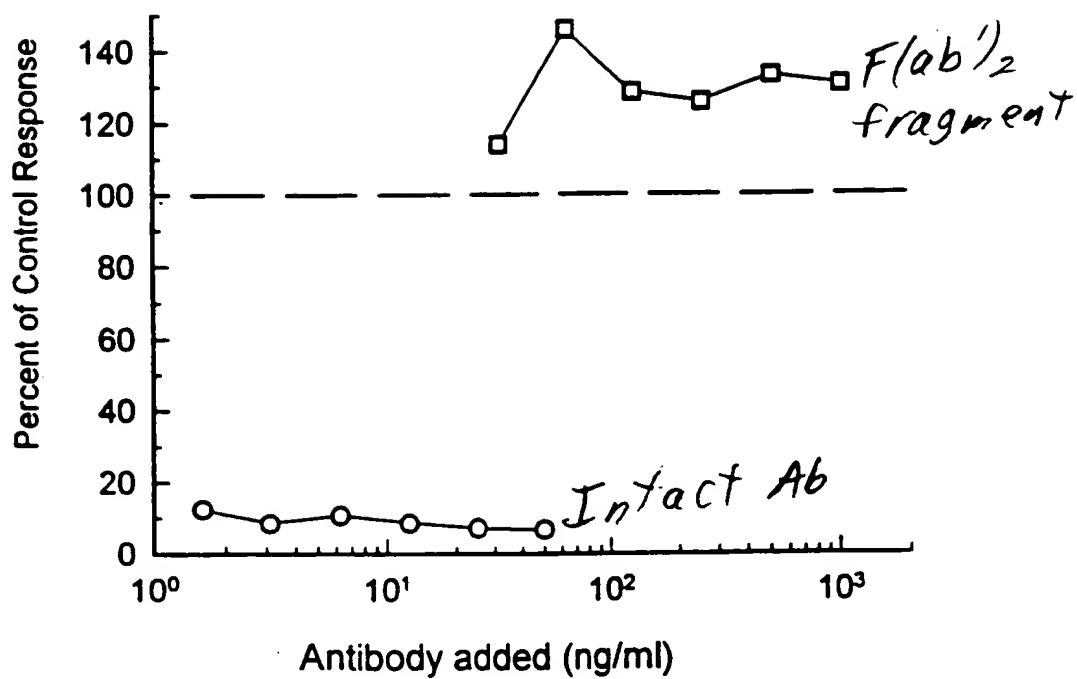


Fig. 40

1

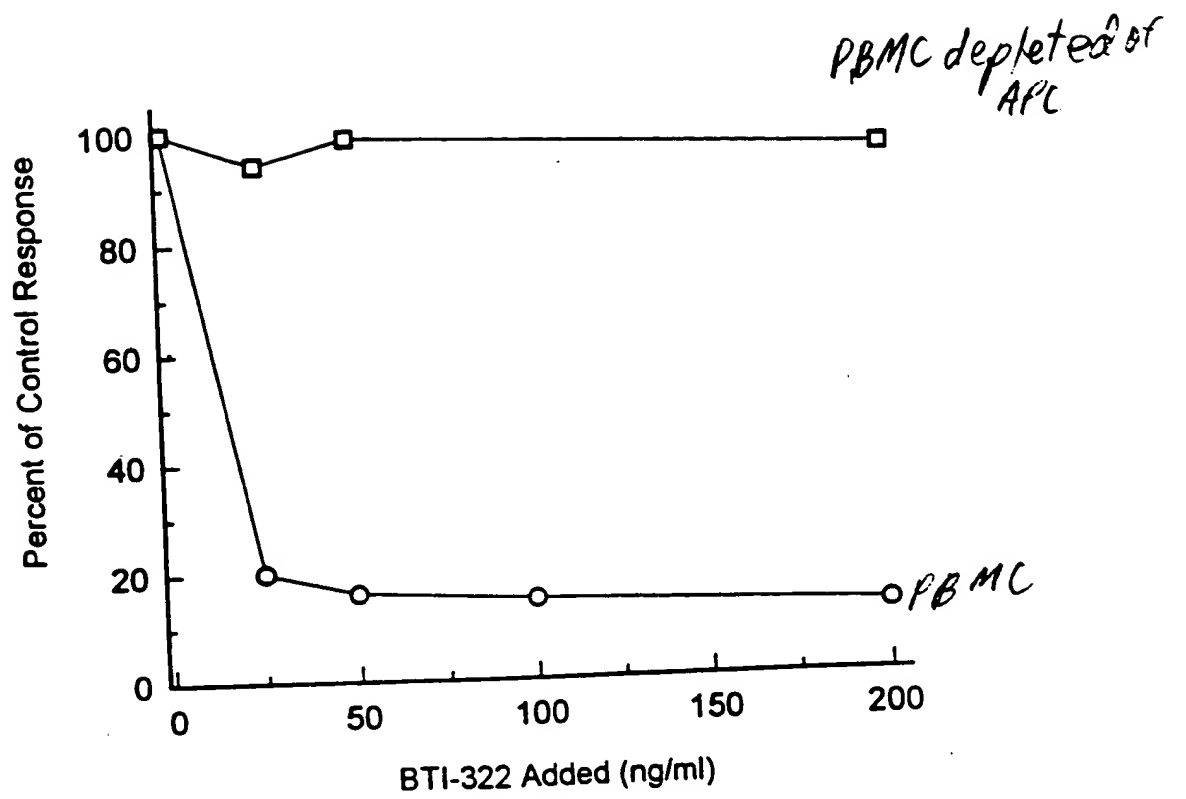


Fig 41

862040" 22095060